

1932



BRISTOL
PORT SANITARY AUTHORITY

ANNUAL REPORT
OF THE
PORT MEDICAL OFFICER
OF HEALTH.

R. H. PARRY, M.B., B.S (Lond.), D.P.H.

5903



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R. H. PARRY, M.B., B.S. (Lond.), D.P.H.

**Deputy Port Medical Officer*

A. G. MORISON, M.A., M.D., D.P.H.

**Assistant Port Medical Officers*

C. P. HAY, M.B., Ch.B., D.P.H. (from 3rd Aug., 1932).
 G. C. KELLY, B.Sc., M.D., D.P.H. (from 20th August).
 A. R. FORBES, M.B., Ch.B., D.P.H. (from 20th Sept.)

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Assistant Port Officers

T. E. HOWICK (from 22-8-32). C. A. SAMPSON.

Rat Catchers

*C. H. RYMAN		*C. SCORRER
*F. PEACOCK		E. R. POOLE

1. Certificated Sanitary Inspector.
2. Certificated Meat and Food Inspector.
3. Master Mariners' Certificate.
4. Liverpool University Cert. San. Science.

* Also engaged in the City.

INSPECTION OF ALIENS*Supervising Medical Inspector, R. H. PARRY, M.B., D.P.H.**Medical Inspectors*

A. G. MORISON, M.A., M.D., D.P.H.
 C. P. HAY, M.B., Ch.B., D.P.H. (from 3rd Aug., 1932).
 G. C. KELLY, B.Sc., M.D. D.P.H. (, 20th Aug., 1932).
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CONTENTS, 1932

	PAGE
INTRODUCTION	5
1. AMOUNT OF SHIPPING ENTERING THE PORT ...	8
2. CHARACTER AND TRADE OF PORT	8
3. SOURCE OF WATER SUPPLY	11
4. INFECTIOUS DISEASE	11
5. MEASURES AGAINST RODENTS	18
6. HYGIENE OF CREW'S SPACES	25
7. FOOD INSPECTION	26
8. MISCELLANY	33

BRISTOL PORT SANITARY AUTHORITY.

ANNUAL REPORT, 1932.

MY LORD MAYOR, LADIES AND GENTLEMEN,

I have the honour to present to you a report upon the work of the Port Sanitary Authority during the year 1932.

During another year the officers of the department have carried out their duties successfully. In spite of the close contact which the port has with countries where acute infectious diseases such as cholera, plague, or smallpox are frequent, no cases of an acute infectious nature appeared in the city or district during the year. This is no mere matter of 'good fortune' but it has necessitated continuous vigilance on the part of the responsible officers night and day. Ships from 'infected' or suspicious ports have been carefully inspected on arrival at the port and kept under observation whilst in port. As mentioned in previous reports, the results may not be very outstanding on paper as they are mostly negative, but the preventive work done at this port is of the first importance not only to the port and city but also to the whole country.

Particular attention is drawn to the following :—

1. s.s. "Caduceus" arrived Avonmouth with a case suspicious of plague on board (p. 12).
2. s.s. "Marouka Pateras" arrived Avonmouth with a considerable number of dead rats on board (p. 19).
3. Contamination of a cargo of mutton and lamb with arsenic (p. 26).

During the year under review, 980 ships arrived at Bristol ports from "foreign" countries and 5,838 from coastwise, making a total from "foreign" and coastwise of 6,818. Of these ships, 31 were from ports known to have been infected by plague. Your medical officers visited 250 ships altogether and in nearly all these examined the crews. This compares with 285 ships visited during 1931. The port sanitary inspectors boarded 2,424 ships.

The number of cases of sickness landed from vessels arriving at the port was 150, in addition 67 cases of infectious and other sickness were reported to have occurred on vessels during the voyage, but had been disposed of prior to arrival.

There was no case or suspected case of yellow fever, smallpox or typhus on board these vessels. Twelve cases were removed from ships to the isolation hospital for observation or treatment.

The medical inspectors of aliens inspected 121 aliens and subjected 11 of these to detailed examination. No certificates were issued during the year.

The detection of rodent plague is one of the most important duties of the port sanitary authority. All ships from infected or suspicious ports were examined thoroughly for rat indications and wherever possible samples of rats were obtained for pathological examination for plague. In all 203 rats from these ships were examined during the year. In table H (page 24) are found the number of ships dealt with in this manner and particulars concerning this work. For the purpose of sampling the rat population in the vicinity of the quays, 266 rats were examined pathologically giving a total of 469 examined during the year.

The number of certificates issued under Article 27 of the International Sanitary Convention of 1926 was as follows :

Deratisation ...	...	25
Deratisation exemption		121
		—
Total	...	146
		—

Finally, the best thanks of the department are due to the assistance given to us by H.M. Customs officers and the officers of the Bristol docks department. I desire also to bring to your notice the excellent service given to the authority during the year by all the officers under the supervision of my deputy, Dr. A. G. Morison.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. H. PARRY,
Port Medical Officer of Health.

REPORT ON THE WORK OF THE PORT SANITARY AUTHORITY

BY

A. G. MORISON, M.A., M.D., D.P.H.,
Deputy Medical Officer.

The Port of Bristol comprises the Avonmouth docks, the City docks, and the Portishead docks which have a total water area of 176 acres, and a dock quayage of 30,690 feet. The Corporation of Bristol are the owners of the entire dock system, the administration of which is vested in a committee, the Port of Bristol Authority.

During 1932 the following vessels entered the docks :—

	<i>Number</i>	<i>Tonnage</i>
Foreign ...	980	2,281,332
Coastwise ...	5,838	789,136
Total ...	6,818	3,070,468

I.—Amount of Shipping entering the Port during the year 1932.

(AVONMOUTH, PORTISHEAD AND BRISTOL DOCKS)

Table A.

	Number *	Tonnage *	Number inspected		Number reported to be defec- tive	Number of vessels on which defects were remedied	Number of vessels reported as having or having had during the voyage infectious disease on board
			By the medical officer of health	By the sanitary in- specter			
Foreign {	Steamers ...	980	2,281,332	207	857	197	19
	+Motor ...			41	110	3	4
	Sailing ...			—	—	—	—
	Fishing			—	—	—	—
Total Foreign ...	980	2,281,332	248	967	200	194	23
Coastwise {	Steamers ...	4,483	655,230	1	887	141	—
	+Motor ...			1	297	14	—
	Sailing ...			—	273	6	—
	Fishing			—	—	—	—
Total Coastwise ...	5,838	789,136	2	1,457	161	161	—
Total foreign and coastwise ...	6,818	3,070,468	250	2,424	361	355	23**

† Includes mechanically propelled vessels other than steamers.

* Figures supplied by Port Authority. The foreign tonnage includes vessels entering from a coastwise port to load for a foreign port.

** Excluding vessels having venereal disease on board.

II.—Character of Trade of Port.

Table B.

(a) Passenger Traffic during 1932.

No. of passengers		1st Class	2nd Class	3rd Class	Trans- migrants	Total
Inwards {	Aliens	140	—	13	—	153
	British	1,675	—	—	—	1,675
Outwards {	Aliens	86	—	—	—	86
	British	1,685	—	—	—	1,685

The foreign ports from which passengers principally arrived were :—

Kingston (Jamaica), Trinidad, Barbados, Port Limon, Puerto, Santa Marta, Cristobal, and West African ports.

(b) Cargo Traffic.

PRINCIPAL IMPORTS

Commodities							Tons
Grain	...	...	...	Quarters	...	4,220,077	859,863
Oilseeds	...	...	...	...	...	—	69,310
Oilcake	...	...	...	...	...	—	21,557
Flour and meal			...	...	...	—	104,436
Fruit :							
Bananas	...	...	...	Bunches	...	5,892,240	88,756
Oranges and lemons			...	Cases	...	305,878	15,106
Other green fruit	...	...	...	...	...	—	9,531
Canned	...	...	...	...	...	—	2,505
Dried	...	...	...	...	...	—	4,864
Metals and ores :							
Brass	...	...	...	...	...	—	518
Copper	...	...	...	...	...	—	8,838
Iron	...	...	...	...	...	—	10,546
Lead	...	...	...	...	...	—	5,100
Spelter	...	...	...	...	...	—	2,888
Pyrites	...	...	...	...	...	—	11,411
Zinc concentrates	...	...	...	...	...	—	51,650
Paper	...	...	...	...	...	—	33,587
Petroleum...	...	...	...	...	...	—	538,387
Provisions :							
Bacon	...	...	...	...	...	—	209
Butter	...	...	...	...	...	—	6,200
Cheese	...	...	...	...	...	—	9,431
Lard	...	...	...	...	...	—	6,312
Frozen meat	...	...	...	...	...	—	8,574
Sugar :							
Refined	...	...	...	...	...	—	2,143
Unrefined	...	...	...	...	...	—	3,196
Glucose	...	...	...	...	...	—	1,105
Molasses	...	...	...	...	...	—	5,650
Tobacco	...	...	...	...	...	—	21,057
Wine	...	...	...	Pipes	...	4,548	2,730
"	...	...	...	Dozens	...	2,744	68
Spirits	...	...	...	Puncheons	...	371	222
"	...	...	...	Dozens	...	37,582	752
Wood goods	...	...	...	...	...	—	100,658
All other goods	...	...	...	...	...	—	196,673
Total Foreign Imports						...	2,203,833

The storage capacity under the control of the port authority is over 250,000 tons, with a cold storage capacity of 500,000 cubic feet.

The chief imports are seen to be grain, flour and meal, fruit, provisions, meat, cocoa, coffee, sugar, tobacco, metals, ores, oil-seeds, paper, oil and timber. Ten per cent. of the grain imported into this country comes through Bristol. Nearly 700,000 tons of oil are imported annually. Twenty per cent. of the tobacco imported into the United Kingdom enters by Bristol, and about six million bunches of bananas enter the port annually.

PRINCIPAL EXPORTS

Commodities						Tons
Chemicals :						
Saltcake	...	...	...	...	...	3,166
Other kinds	...	...	...	...	...	793
Clay	...	...	...	...	...	3,191
Coke	...	...	...	...	...	14,310
Concentrates :						
Roasted	...	...	...	...	...	2,031
Earths	...	...	...	...	...	964
Metals :						
Iron	...	...	...	...	...	8,818
Tinplates	...	...	...	...	...	3,240
Paper	...	...	...	...	...	843
Strontia	...	...	...	...	...	4,320
All other goods	...	...	...	...	...	25,029
Total Foreign Exports						66,705

(c) Ports from which ships have arrived.

AFRICA — — Biera.

AMERICA

(Central & South) Porto Cortez : Tela : Puerto Castille :
Tampico : San Lorenzo : River Plate :
San Nicholas : Buenos Ayres : Rosario.

AMERICA

(United States) Baton Rouge : Baltimore : New York :
New Orleans : Boston (Mass) : Houston :
Jacksonville : Philadelphia : Mobile :
San Pedro.AUSTRALIA — Thevenord : Sydney : Melbourne :
Fremantle : Port Pirie.

BELGIUM — Antwerp : Ghent.

BURMA — — Rangoon.

CANADA - - Sorel : New Westminster : St. John :
Vancouver : Halifax : Montreal : Botwood.

CYRIA — — Haifa.

DENMARK — Viborg.

EGYPT — — Alexandria.

FINLAND — Uleaborg : Hango : Kotka.

FRANCE — — Tonnay Charente : St. Malo : Deauville :
Le Havre : Bordeaux : Treport : Dunkirk :
Dieppe : Brest : Nantes.GERMANY — Stettin : Hamburg : Bremen : Bremerhaven :
Wismar.

HOLLAND — Rotterdam : Amsterdam.

INDIA — — Calcutta.

ITALY — — Palermo : Messina.

JAMAICA — Kingston.

NEW ZEALAND — Bluff : Lyttelton : Napier : Auckland :
Wellington.

NORWAY — — Larvik : Risør : Fredrikstad : Oslo : Trangsund.

NIGERIA — — Forcados : Lagos : Sapale.

PERSIA — — Bushire : Abadan.

PORTUGAL — Lisbon : Aporto : Faro : Cadiz : Mondego Bay.

RUMANIA — Constanza.

RUSSIA — — Archangel : Novorossisk : Batoum :
Nicolaieff : Odessa : Tuapse : Murmansk :
Leningrad : Marioupol : Theodosia.SPAIN — — Huelva : Burriana : Valencia : Barcelona :
Castillon : Cartagena : Malaga.

SWEDEN — — Gothenburg : Stockholm : Norrköping.

TURKEY — — Smyrna.

WEST INDIES — Curacao : Aruba : Barbados.

Grain is imported from Canada, United States, South America, Australia, India, the Persian Gulf and Black Sea ports. Motor spirit and other petroleum products arrive from Mexico, West Indies, Trinidad, United States, Black Sea, Persia, and East Indies. Bristol is one of the chief ports in the Kingdom for the banana trade from West Indies and Central America. The general cargo trade between the port and Canada, United States and Europe is well maintained. The import trade from Australia and New Zealand consists of frozen produce, provisions and general goods.

III.—Source of Water Supply.

(a) *For the Port.*

(b) *For shipping.*

The water used in the port and by ships in the docks is supplied by the Bristol Water Works Company. Hydrants are provided on the quaysides.

Samples of water from ships.

Six samples of water were taken from vessels for examination by the public analyst ; and the following results were obtained :

<i>Water taken on board at :</i>	<i>Result of analysis.</i>
Rosario.	Beyond a somewhat high count on <i>Agar</i> , the water would appear to be quite sound.
Almeria.	Regarding an excess of chlorine as due to a mineral source, small exception can be taken to this sample.
Oran.	The bacteriological count is too high and the chemical evidence unsatisfactory. The water is dangerous.
Aalesund, Norway.	Chemical and bacteriological figures are satisfactory—the water is of high standard.
Halstad.	The organic matter is excessive but the bacteriological result is satisfactory. Possibly a dirty tank.
Oran, N. Africa.	A dangerous water with excess of combined chlorine, organic ammonia and bad bacteriological count.

Where called for, water tanks in all vessels were washed out, cleansed, and cement washed under the supervision of the port sanitary inspectors.

(c) *No. of water boats and their sanitary condition.*

There are no water boats in use at Avonmouth or Portishead.

One water boat is in use at Bristol docks. This vessel is inspected periodically by the port sanitary inspector, and is cleansed and cement washed when necessary.

IV.—Infectious Disease.

(1) *Arrangements for detection of infectious disease on inward vessels.*

The port medical officer of health is notified of cases of sickness on any inward vessel from the sources detailed below. If the ship is from foreign all cases of sickness on board are seen by the port medical officer. If these cases are found to be of an infectious nature requiring removal to hospital they are dealt with by him. In appropriate cases where a doctor is not attached to the ship, the captain is advised to obtain the services of a local medical practitioner.

Where a local practitioner is called upon to attend any case of sickness at the port and where he has suspicion that the case is infectious he at once notifies the port medical officer of health.

Table C.

Cases of infectious sickness landed* from vessels.

Disease	No. of cases during 1932		No. of vessels concerned	Average no. of cases for previous 5 years
	Passen- gers	Crew		
<i>Infectious diseases, including :</i>				
Enteric fever	—	1	1	1·0
Malaria	—	7	4	6·6
Influenza	—	4	4	5·4
Dysentery... ..	—	1	1	0·4
Leprosy	—	1	1	—
Glandular fever	—	1	1	—
Pulmonary tuberculosis... ..	1	1	2	2·8
Venereal diseases	—	32	25	28·0
Climatic bubo	—	3	3	1·0
Tropical ulcer	—	1	1	—

Other diseases not included in Table C above landed* from vessels.

Disease	No. of cases during 1932		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Rheumatism	1	3	4	1·4
Beri-beri	—	1	1	0·4
Goitre	1	—	1	—
Diseases of nervous system ...	1	8	9	4·2
„ „ circulatory system ...	1	1	2	2·6
„ „ respiratory system ...	—	18	15	6·2
„ „ digestive system ...	—	21	19	14·2
„ „ genito-urinary system...	—	1	1	2·2
„ „ skin and cellular tissue	—	9	9	9·0
„ „ bones and organs of locomotion	—	1	1	1·6
Traumatism	2	19	15	10·2
Ill-defined diseases	—	9	7	3·6

* Includes only cases requiring medical attention, but all were not removed from their ships to hospital.

S.S. "Caduceus."

On 15th February the above ship arrived at Avonmouth. No sickness was reported. According to the routine, however, the medical officer inspected the crew. He found a fireman suffering from a tender, matted mass of glands in the right groin. The case was looked upon as one suspicious of plague, and the following precautions were taken forthwith :

- (1). The patient was removed to hospital.

- (2). Seventeen of the crew, who were to be paid off during the afternoon, were disinfected, and their baggage was disinfected also. The medical officers of the districts to which they were proceeding were informed of the circumstances.
- (3). The usual precautions were taken with regard to rats on the ship, and the cargo was discharged under the strictest supervision.

Full investigation of the case took place in hospital, including consultation with a medical officer of the Ministry of Health. The suspicion of the illness being plague was not confirmed either clinically or bacteriologically.

Five rats were caught on board the ship, and they were fully examined, no evidence of plague infection being found.

Leprosy.

In August the Ministry of Health informed us of the impending arrival from the Honduras of a British-Indian subject suffering from leprosy. We were requested by the Ministry to give every help to the man on his landing.

On arrival, he was found to be suffering from the cutaneous form of leprosy on the face, arms and trunk. The patches were of the typical brownish-white colour and varied in size from that of a shilling piece to 3 or 4 inches in diameter. They were painless, free from discharge and there was no ulceration. Evidently there had been no fresh patches after the first 3 or 4 days of the illness, but they were increasing in size. The leprosy had been evident for about three months.

The man was quite able to be about, and we assisted him in his arrangements to proceed at once to London, whence he was to return to India.

Mooring stations.

During the year, the approval of the Ministry of Health was obtained to the following mooring stations :—

(a) Outer mooring station—Walton Bay.

(b) Inner mooring stations—

(1) Avonmouth. (a) North wall, Royal Edward Dock.

(b) Dolphin buoy.

(c) Berth opposite sheds B, C and J in the old dock.

(2) Bristol. Railway wharf (two berths).

(3) Portishead. By individual arrangement, according to circumstances.

Closely associated with the matter of mooring stations is that of boarding stations for the port. After due consideration with the customs authorities, boarding stations for the port of Bristol were re-designated to come into line with the above approved mooring stations.

- Bristol : For "infected" or "suspected" vessels—Walton Bay.
For all other vessels—the entrance to Cumberland basin or the place of mooring, discharge or loading.
- Avonmouth : For "infected" or "suspected" vessels—Walton Bay.
For all other vessels—the lock entrance to Avonmouth docks, or the place of mooring, discharge or loading.
- Portishead : For "infected" or "suspected" vessels—Walton Bay.
For all other vessels—the dock entrance or place of mooring, discharge or loading.

(2) *Arrangements for notification to the Port Sanitary Authority of the arrival of inward vessels requiring special attention are as follows :—*

- (a) Local ship owners and agents notify the port medical officer of health of expected arrivals. Their co-operation and help is much appreciated.
- (b) Masters of locally owned vessels report by wireless to the owners the time they expect to arrive in port with information regarding the number of passengers and aliens on board and cases of sickness (if any).
- (c) Information from Walton Bay signalling station before the ship has reached port.

Pilotage is compulsory except for coastwise trading vessels not carrying passengers. Every pilot is supplied with a list of infected ports compiled from the weekly records received from the Ministry of Health. The pilots signal to the signalling station at Walton Bay information elicited by them relative to sickness and this information is transmitted to the port medical officer of health. A sum of £15 per annum is paid to the Walton Bay signal station as a retaining fee for such services.

- (d) H.M. custom. officers, who are also supplied with the list mentioned above, board all inward vessels usually at the lock entrances. The officers render every possible assistance to the Port Sanitary Authority in this matter, there being full co-operation between the two departments.
- (e) A port sanitary inspector boards every ship immediately on arrival from a foreign port. The master or surgeon of every vessel is required to fill in a form giving information as to the health of the crew during the voyage and particulars of any sickness that has occurred. This form has been redrafted during the year as follows :—

BRISTOL PORT SANITARY AUTHORITY.

FOREIGN ARRIVAL REPORT.

BRISTOL
AVONMOUTH
PORTISHEAD } DOCKS.

a.m.....

Time p.m.....

No..... Date.....

S.S.
M/V Reg. Tonnage..... Nationality..... Captain.....No. of Crew { White No. of Passengers { British..... Cargo.....
Coloured..... Aliens

Local Agents.....

Port of Departure (with date)..... Touched at (with dates).....
(Underline "Infected" or "Suspected" Ports).

Drinking water taken at

HEALTH.Passengers or Crew
with Name or Rating.

Disease.

*Disposal.

1. To be answered by
Captain.Any Illness or Death
during Voyage?

1.

2.

3.

Any Illness now on
Board on Arrival?

1.

2.

3.

* Disposal : place landed, and if admitted to Hospital ;
or died, or recovered.

2. For Sanitary Staff :

Bills of health.....

P.M.O. visited..... ; Action and observations.....

RATS.Have any rats been seen (To be answered by Captain).
alive or dead during voyage?**CERTIFICATE.**

	Date	Port of Issue.	Valid or Invalid.
Deratisation			
or			
Exemption			

Notes

Any rat indications seen by Port Sanitary Staff on preliminary search.....

If action taken, its nature.....

Signature of

Captain or Surgeon Signature of

Captain/Surgeon.

Port Sanitary Inspector.....

Any Special or Unusual Circumstances, and Action taken :—

(continued overpage)

CONTACT LIST.

Name.	Destination.	Name.	Destination.
-------	--------------	-------	--------------

Forward notices sent..... 19..... (For Office use).

- (f) Wireless messages. Apart from messages received from vessels by the local owners and thence transferred to the port sanitary officer no arrangements exist for receiving direct wireless messages from ships.

(3) *What vessels are boarded on arrival, by whom, where, and how.*

All vessels from foreign on arrival at Bristol, Avonmouth, or Portishead are boarded by a port sanitary inspector at the lock entrances. The inspector immediately notifies the port medical officer of health of any cases of sickness that may be present on board or have occurred during the voyage, of any serious infestation with rats or of the presence of dead rats. A port medical officer visits such ships as soon as possible. In addition every ship from ports considered to be dangerous or suspicious in regard to plague, cholera, yellow fever, typhus, or smallpox is visited on arrival by a port medical officer. The following are the instructions observed in the port. The inspectors notify the port medical officer of all ships from (a) all ports on lists which are supplied weekly— including ports on these lists during the previous four weeks ; (b) all Mediterranean ports, and all Black Sea, Russian, Indian, Gold Coast and South American ports, whether on these lists or not ; (c) any special circumstances, or a ship due from an unusual port is also so notified. During 1932, 248 ships from foreign were inspected by a medical officer and the crews examined.

(4) *Arrangements for disposal of cases of infectious disease and for observation or surveillance of contacts :*

Patients suffering from any infectious disease and cases requiring observation are removed to Ham Green Isolation Hospital, or, if of smallpox to Novers Hill Hospital. Contacts of infectious cases if not removed to hospital are kept under observation by the port sanitary officers, and in the event of their proceeding to an address outside the city, the medical officer of health of the district concerned is advised. All ships from infected or suspicious ports are visited daily during their stay in the docks by a sanitary inspector. He enquires as to the health of the crew and those working on the ship.

(5) *Arrangements for disinfection of infected quarters, bedding, clothing, etc.*

Infected quarters are fumigated by sulphur, or by spraying with disinfectant ; and the bedding clothing, etc., is removed by means of motor vans to the central disinfecting station, Bristol, and there disinfected by steam. Laundry from any suspicious ship is taken for disinfection by the sanitary staff to Bristol.

(6) *Arrangements for cleansing of persons :*

This is carried out at the bathing centre at the Bristol disinfecting station to which patients are conveyed by the Health Committee's motor ambulance. Facilities are provided for bathing both males and females, and attendants are available on the premises to supervise the operation.

(7) *Arrangements for ambulance transport :*

The motor ambulances belonging to the Health Committee are used for this purpose.

(8) *Arrangements for detection and treatment of venereal disease amongst sailors are as follows :*

(a) Enquiries are made by the medical officers and port sanitary inspectors of the responsible officers on all ships for the history of cases that may have reported during the voyage.

(b) Examination of the crews of ships by a port medical officer results in the detection of a number of venereal cases not reported by the masters as above. During 1932, there were 32 such cases.

Leaflets stating the times of attendance at the Health Committee's venereal diseases clinic at the Bristol Royal Infirmary are given to the masters of vessels and to the infected. Treatment at this institution can be obtained free of cost.

The following particulars relate to seamen treated at the municipal clinic during the year :

1931		1932	DIAGNOSIS.			
			Syph.	Soft Sore	Gon.	Non-Ven.
	CASES					
192	Total	187	58	2	68	59
156	New cases	158	38	2	59	59
	ATTENDANCES					
859	Total	802	394	3	275	130
524	New cases	508	154	3	221	130
	INPATIENTS					
8	Total	8	2	—	6	—
8	New cases	8	2	—	6	—
	INPATIENT DAYS—					
162	Total	170	51	—	119	—
162	New cases	170	51	—	119	—

(9) and (10) *Arrangements for (a) bacteriological examination of rats and (b) for other special examinations.*

Arrangements continue with the pathological department of the Bristol University for the systematic examination of rats, and for any special examinations which may be required.

During the year under review 469 rats were examined for plague, 203 being from the ships at the ports and 266 from the sheds and quays at the docks. The ratio of rats examined during the year was 18·2 per cent. from ships and 9·2 per cent. from sheds and quays.

Table D.

Cases of infectious sickness on vessels during voyage but disposed of prior to arrival.

Disease	No. of cases during 1932		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
<i>Infectious diseases, including :</i>				
Enteric fever	—	2	2	1·4
Malaria	—	4	2	9·6
Smallpox	—	1	1	0·4
Influenza	—	22	2	3·8
Pulmonary tuberculosis...	—	3	2	0·4
Venereal disease	—	6	6	4·4

Other diseases not included in Table D above on vessels during voyage but disposed of prior to arrival.

Disease	No. of cases during 1932		No. of vessels concerned	Average no. of cases for previous 5 years
	Passengers	Crew		
Henoch's purpura	—	1	1	—
Diseases of nervous system	—	1	1	1·2
„ „ circulatory system	—	4	4	2·2
„ „ respiratory system	1	4	4	2·4
„ „ digestive system	—	6	5	6·6
„ „ genito-urinary system	—	1	1	1·4
„ „ skin and cellular tissue	—	3	3	0·8
Traumatism	—	4	4	3·8
Ill-defined diseases	—	4	4	2·6

V.—Measures against Rodents.

(1) Steps taken for detection of rodent plague.

Every ship from foreign is boarded immediately on arrival by a port sanitary inspector and also by a port medical officer, if from a plague-infected or suspicious port. These officers satisfy themselves as to the condition of the ships regarding rats and inspect the last certificate of deratisation or exemption. The holds are examined immediately they are opened.

During a ship's stay in the port and while the cargo is being discharged she is continuously observed for signs of rats. The port sanitary rat officers set traps and make every effort to obtain samples of rats for pathological examination.

The presence of dead rats is always treated as urgent. Immediate pathological examination is made and appropriate action taken according to circumstances.

Sampling of the rat population of the warehouses and sheds is done constantly and the presence of rodent plague excluded by pathological examination.

Tables E and F show the work done in this connection at the port during 1932.

(2) *Measures taken to prevent the passage of rats between ships and the shore.*

The following precautions are taken on ships from plague-infected ports :—

Where rat guards are carried by the vessel, these are required to be applied to stop the passage of rats from the ship to the shore. Rat guards of a special pattern can be hired for a nominal fee from the Port Sanitary Authority. Owing to the inefficiency of rat guards generally the following additional precautions are taken. The mooring ropes are covered with tar which is kept moist, and freshly applied night and morning ; the same treatment is applied to the wire hawsers, and also to the manilla ropes by means of a piece of hessian cloth tied thereon. Gangways are kept raised whenever possible, or alternatively are well lighted during the night, and the sides and undersides kept moist by means of tar. On suspicion the additional precaution is taken of booming the ships off the quayside by means of rafts. Deratisation by fumigation is insisted upon when a ship is found to be rat infected and contemplates remaining in the docks.

(3) *Methods of deratisation of :*

(a) *Ships.*

Trapping, fumigating with sulphur, and with hydrocyanic acid. Fumigation is carried out by private firms, and is always done under the supervision of the port sanitary inspectors. The method adopted is by burning sulphur, 3-lbs. being allowed for each 1,000 c.ft. of space and the exposure lasting for at least eight hours. To ensure complete combustion of the sulphur, flattened trays have been specially made and these stand in larger trays containing water. Cotton waste well soaked in wood alcohol reaches through the sulphur to the bottom of the tray. This method has been found to give very good results.

Cyanide fumigation is performed by the spraying of liquid hydrocyanic acid, or by using Zyklon B. It is carried out by private firms under the supervision of the port sanitary officers.

During 1932, 25 deratisation and 121 deratisation exemption certificates were issued. Deratisation was carried out by fumigation in every instance, 13 of the ships being done by sulphur and 12 by cyanide, eight of the latter being by Zyklon B. We consider that trapping may give useful information as regards the rat population of a ship, but that it is not an effective method of deratisation, if deratisation be called for.

The greek ship "*Marouka Pateras*" arrived at Avonmouth docks on the morning of the 5th February from River Plate ports. She was met by the deputy medical officer of health who found

the crew all well. When the holds were opened, however, he noticed considerable rat indications. He interviewed the captain and informed him that the ship was not to be worked until she was boomed off from the quay-side. The captain agreed to the suspension of work, and the medical officer caused a search of the ship to be made forthwith. Thirty-one dead rats were recovered and rat indications generally throughout the vessel were revealed.

Notice was served immediately upon the captain to take such precautions for effectually stopping the access of rats from the ship to the shore as were in the opinion of the port medical officer reasonably necessary for the prevention of danger arising to the public health from this ship.

The following is a copy of the notice which was served upon the master :—

I hereby certify that I have examined your ship and find that there is or has been during the voyage an unusual mortality among rats, and I now require you, by reason of Article 24 (2) of the Cholera, Yellow Fever, and Plague Regulations, 1907, to employ all such means for effectually stopping access of rats from the ship to the shore as are in my opinion measures reasonably necessary for the prevention of danger arising to public health from the ship.

These measures are :—

1. Forthwith to fumigate the ship, to my satisfaction. (A hydro-cyanic gas process is appropriate).
2. Keep the ship boomed off by rafts from the quay-side to a distance approved by me.
3. Keep attached to all ropes from the ship to the shore effective rat-guards and to tar all such ropes according to the instructions of my inspectors night and morning.
4. Paint the gangway a white colour (by limewash), the gangway to be kept well lighted after dark, and to be hoisted aboard ship when ceased to be used for the day.
5. The cargo to be worked under the supervision of my officers.
6. Generally, to observe the instructions of my port sanitary officers concerning measures for the safety of the public health."

In consequence, the ship was fumigated with cyanide, being given $3\frac{1}{2}$ hours' exposure. Next day were recovered 32 dead rats, 29 of which seemed to have been killed by the cyanide. The cargo was discharged under our complete supervision, and up to the time of full discharge, 152 rats were recovered.

Two points are interesting :—

1. We recovered rats killed by cyanide in one hold 10 to 12 feet below the top tier of bags.
2. One rat was delivered on to the grain-carrying belt of the bucket elevator. Two men cautiously watched the exits of all these elevators, and another man watched each hold.

After a search of the ship when she was empty, we were satisfied that there were still rats on board, so a second fumigation with cyanide was required. Next day, we recovered 20 dead rats, 8 evidently having been killed by the cyanide, the others being more decomposed. The total number of rats collected from the ship was 179, but the great majority of these were too decomposed for any examination to be made. 42 were examined by Professor Walker Hall, who reported a negative result as regards plague. One rat was especially examined and reported upon thus :—

“The bacteria present in the splenic nodule have yielded the following features :

Morphology. Gram negative, non-motile rods, presenting many but not all the characteristic features of *B. Pestis*.

Culture. Growth occurs at 22 deg. C. and 37 deg. C. on all media except McConkey's. The colonies on the plates, etc. are similar in appearance to *B. Pestis*.

Biochemical. Acid, but not gas, is produced in glucose, maltose, mannite, and salicin.

Lactose, saccharose, inulin, and litmus milk are unaffected although growth occurs.

Indol is not produced, and gelatine is not liquified.

Inoculation into Guinea Pigs. Scarified animals are unaffected in health, and at the autopsy do not show any signs of *B. Pestis* infection.

Subcutaneous inoculation is followed by death in two to three days, with intense local oedema, haemorrhages, and septicaemia.

The organisms recovered from the local lesion and the heart blood yield characters identical with those of the bacteria inoculated.

Differential. None of the rats from this ship have yielded bacteria belonging to the *Salmonella* group or derived from “rat virus.”

Conclusion. The organisms responsible for the infection in this rat is one of the *Pasteurella* group, but not *B. Pestis*.

The reactions are more closely those of *Pasteurella Aviseptica*.”

The crew remained well except one member of the crew who was removed to hospital. He had some bronchial catarrh and looked debilitated. One would have been surprised if anything had developed in this case, but it was thought better to have the man under observation. The ultimate diagnosis of the case was an influenza-like cold.

The ship left for Cardiff on the 19th instant, and the medical officer of health of Cardiff was informed of all the circumstances.

(b) *Premises in the vicinity of the docks and quays.*

Trapping and laying down of poisoned baits continue constantly.

(4) *Measures taken for the detection of rat prevalence.*

(a) *In ships.*

Under " steps taken for detection of rodent plague " the method of dealing with ships from foreign is discussed. The port sanitary inspectors board all inward vessels and examine them for rat indications. This is part of the routine duties of the port inspectors. The rat officers also search ships and set traps during the stay in port.

(b) *On shore.*

Routine inspection of all sheds and warehouses in the vicinity of the docks is carried out by the port sanitary staff. Traps and poisoned baits are laid wherever and whenever indications are found of the existence of rats.

(5) *Rat-Proofing.*

(a) and (b) *ii. On shore.*

As stated in previous reports many of the sheds and warehouses on the quay side have been built or rebuilt during the last few years and may be considered to be rat-proof.

There are still at Avonmouth a few old wooden floors in sheds which are not rat proof. It is gratifying, however, to be able to report that at the time of writing, work is going on in three of these sheds, the floors being replaced by concrete. This will leave only two wooden floors at Avonmouth and we hope that these also will have disappeared by the end of 1933.

(b) *i. In ships.*

When ships are examined for indications of rats for the purpose of issuing a deratisation or deratisation exemption certificate, much attention is paid to the question of harbourage. Before a certificate is issued the master of the ship has to remove the harbourage to the satisfaction of the port medical officer of health.

Table G.
Plague "infected" or "suspected" vessels arriving in the Port during 1932.

Name of vessel	Date of arrival	Whether "infected" or "suspected"	Methods of rat destruction employed.	No. of dead rats recovered	Whether a certificate of deratisation was issued?	Remarks
—	—	—	—	—	—	—

Table H.

Measures of rat destruction on vessels from plague infected ports (other than those included in Table G) arriving in the port during 1932, and number of certificates issued in respect of such vessels.

Total no. of vessels arriving from plague infected ports	No. of such vessels fumigated with SO ₂	No. of rats killed	No. of such vessels fumigated with HCN	No. of rats killed	No. of such vessels on which trapping, poisoning, etc. were employed	No. of rats killed	No. of such vessels on which measures of rat destruction were not carried out	No. of fumigation certificates issued on form "Port 11"		No. of other certificates issued
								Deratisation	Exemption	
1	2	3	4	5	6	7	8	9	10	11
31	1	12	1	69	8	8	21*	2	3	—

Most of these vessels discharged only part cargo at Bristol docks.

* These ships were all examined for rat indications, but no measures were taken, either because there was no evidence of rats, or because of very short stay in port.

Table I.
Measures of rat destruction on vessels (other than those included in Tables G and H) and number of certificates issued in respect of such vessels during 1932.

Vessels fumigated by SO ₂	No. of dead rats recovered	Vessels fumigated by HCN	No. of dead rats recovered	Vessels on which trappings, poisoning etc. were employed	No. of dead rats recovered	No. of Certificates issued on form "Port II"		No. of other certificates issued
						Deratisation	Exemption	
1	2	3	4	5	6	7	8	9
14*	365	11	198	157	466**	23	118	—

* Includes two coastwise ships for which no certificates were issued.

** Includes 50 mice.

VI. Hygiene of crews' spaces.

Table J—Classification of nuisances.

Nationality of vessel	Number inspected during 1932	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British ...	1,975	—	75	284
Other nations ...	449	3	16	91
Totals ...	2,424	3	91	375

VII.—Food Inspection.

(1) (a) *Public Health (Imported Food) Regulations, 1925.*

Resort to legal proceedings was not necessary during the year.

The quantities of food imported and dealt with include the following :—

Fresh, frozen or canned meat, etc.

Frozen beef	...	...	...	...	10,755	qrs.
„ mutton and lamb	...	...	...	...	448,565	carcases.
„ pork	...	...	...	...	12,662	carcases.
„ pork legs	...	...	...	...	300	bags
„ offal	...	...	...	...	4,330	packages.
Cured or salted beef and pork	...	...	...	...	48	tons.
Bacon and hams	...	...	...	...	209	tons.
Canned meat	...	...	...	...	545	tons.
Canned fish	...	...	...	...	451	tons.

Fresh, dried and canned fruit, etc.

Bananas (5,892,240 bunches)	...	...	...	...	88,756	tons.
Green fruit	...	...	...	...	24,121	tons.
Dried fruit	...	...	...	...	4,864	tons.
Vegetables—raw	...	...	...	...	20,203	tons.
canned	...	...	...	...	685	tons.
Vegetables in brine	...	...	...	...	175	tons.
Canned fruit	...	...	...	...	2,505	tons.
Fruit pulp	...	...	...	...	516	tons.

Other foods.

Butter, cheese and lard...	...	...	...	...	21,944	tons.
Grain	...	...	...	...	859,863	tons.
Flour and meal	...	...	...	...	104,436	tons.

Contamination of a cargo of mutton and lamb by Arsenic (arsenious oxide).

S.S. "Cornwall" from New Zealand, via London, arrived at Avonmouth Docks on the 4th June. In the second 'tween deck of No. 1 hold there were 6,000 carcasses of mutton and lamb for Bristol. During their examination we found a large number of them affected by some liquid giving a stain of a slightly dark yellow brown colour. This liquid was present in ice form in the cavities of several carcasses, and in icicle form in several of the stockingette shrouds around the carcasses. So far as we could make out, this liquid seemed to have penetrated from the deck above, whence it was ascertained, hides had been discharged at London. The carcasses affected were for the most part in two tiers above which we could detect evidence of a leak in the deck having taken place. The staining was distinctly different from ordinary brine staining.

Material was submitted forthwith to the city analyst, who reported the presence of arsenious oxide in amounts much beyond the recognised limits.

A bacteriological examination was also performed—with a negative result as regards anthrax, only a few cocci being present; and none of the usual solvents for dyes extracted any pigmentary material.

Every carcase from the hold was individually inspected for staining, and the following three groups were made :—

1. Those showing no evidence of staining, and apparently unaffected,
2. Those showing gross evidence of this foreign matter.
3. Those showing considerably less staining, either on the carcase itself, or on its shroud.

It hardly seemed likely that there would have been any great penetration of the meat in the frozen state by the arsenical solution. It was considered, however, that when the meat came to be defrosted, there would be a grave possibility of penetration taking place.

Several samples were taken for chemical analysis, in order to arrive at a basis for action. It was finally decided to release all unstained carcasses, to condemn all badly stained carcasses, and to call for the sorting of those carcasses slightly stained, especial regard being paid to the quantity of ice associated with the carcasses. From the third group it was possible to save several joints.

In all instances, the owners were informed that the medical officer of health could give no guarantee that any food so released contained no poisonous matter.

304 carcasses showed gross evidence of contamination, and were destroyed; 1,174 showed slight staining either on the carcasses or on the stockingette shrouds. They were sorted and joints saved where possible.

The medical officer of health of the districts to which any consignments from this cargo were sent were informed of all the circumstances, and we also communicated with the port medical officers of ports to which the ship was bound. Later we were informed that two samples from carcasses consigned to Sheffield *via* Manchester had been found to be contaminated with arsenic.

The utmost search has been made to trace the source of this arsenical contamination, but without success. The New Zealand Meat Producers' Board have informed us that the actual pelts which were stored in the deck above the contaminated meat were traced, and samples both of the pelts themselves and of the pelt liquor were obtained for analysis. From this analysis it must be concluded that the arsenic did not come from the pelt liquor. The ship's brine was examined, and it becomes clear that this also was not the source of the contamination. We had the full co-operation of the owners of the consignment throughout, which did much to lessen the anxiety in dealing with a most difficult set of circumstances.

AMOUNT OF UNSOUND FOOD DESTROYED OR OTHERWISE DEALT
WITH SO AS NOT TO BE USED FOR HUMAN FOOD.

Fresh or frozen meat, etc.

			Tons.	cwts.	qrs.	lbs.	
Beef	...	...	1	6	3	13	{includes 5 carcasses.
Mutton and lamb	...		6	19	1	4	{includes 200 carcasses.
Pork	...	...	1	11	3	15	{includes 14 carcasses.
			9	18	0	4	

Canned goods.

		Tins.	Tons.	cwts.	qrs.	lbs.
Apples	... 1 box and	30		2	0	4
Apricots	...	26			1	25
Cherries	...	22				25
Fruit salad	...	3				3
Grape fruit	...	170		1	2	2
Hams	...	168		17	1	16
Milk (condensed)	...	73			1	8
Peaches	...	69		1	1	3
Pears	...	54		1	0	14
Pineapples	...	174		2	1	1
Pork beans	...	165		2	2	0
Salmon	...	8				8
Tomatoes	...	63			3	21
Tongues (lamb)	...	2				1½
			1	10	0	19½

Fruit and vegetables.

			Tons.	cwts.	qrs.	lbs.
Apples	...	...	2	16	0	0
Carrots	...	...	10	0	0	0
Currants	...	...			1	20
Grapes	...	...			1	12
Grape fruit	...	...	2	1	2	0
Haricot beans	...	...	1	14	0	0
Lemons	...	...		2	0	0
Onions	...	...		12	0	0
Oranges	...	...	24	8	0	0
Potatoes	...	...	67	19	0	0
Prunes (dried)	...	...		6	2	4
Raisins	...	...			1	22
			110	0	1	2

<i>Other foods.</i>	Tons.	cwts.	qrs.	lbs.
Barley	11	15	3	0
Cheese		2	0	17
Cocoa beans	4	2	0	0
Flour	20	11	3	26
Lard			2	0
Linseed	1	7	0	0
Maize	19	12	0	0
Rice	3	10	0	0
Wheat	48	18	1	16
	109	19	3	3

Cattle. Pigs.

Total no. of animals from Ireland during the year which were dead on arrival	8	16
No. slaughtered at the lairs on arrival owing to injuries	4	38

(b) *Public Health (Imported Milk) Regulations, 1926.*

No milk (other than condensed evaporated or dried) was imported during the year.

(c) *Public Health (Preservatives, etc., in Food) Regulations.*

The following samples were submitted to the public analyst during the year and examined by him for the presence of preservatives.

Apples	1
Apples juice (cider)	8
Apples pulp	1
Apricots ... 1 }	11
„ (dried) 10 }	
Blackcurrant pulp	7
Cauliflower in brine	1
Cherries glazed 1 }	3
„ in brine 1 }	
„ in syrup 1 }	
Cider	2
Fruit-mixed (dried)	1
Fruit pectin	1
Fruit salad	3
Greengage pulp	1
Gooseberry pulp	1
Orange juice	1
Plum pulp	2
Prawns (canned)	1
Prunes (dried)	1
Raisins	58
Raspberry pulp	9
Strawberry pulp	7
Sugar (soft)	2
Sultanas	8
Tomatoes (tinned)	1
Walnuts	2

In the report for 1931 we gave some points of view concerning the presence of preservatives in food. During 1932 on the following occasions, articles examined contained preservative in excess of the amounts allowed by the Regulations :—

<i>Description of goods.</i>	<i>Amount of preservative found SO₂).</i>		
Apple Juice (cider)	...	...	·20 per cent.
Blackcurrant pulp ...	...	...	·188 „ „
Orange juice ...	...	...	·058 „ „
Apple juice (cider) ...	...	...	·08 „ „
Apple juice (cider) ...	...	...	·101 „ „
Apricots (dried) ...	...	...	·206 „ „
Apricots (dried) ...	...	...	·206 „ „

A warning letter was considered sufficient action in regard to the apricots. In the case of the apple juice and the orange juice, written guarantee of the importers was obtained that it was not their intention to expose these products for sale by retail until they complied with the regulations as regards content of preservative. The blackcurrant pulp was re-exported.

(2) *Shellfish.*

There are no shellfish beds or layings within the jurisdiction of the Bristol Port Sanitary Authority.

(3) *Samples of food examined by :*

(a) *Bacteriologist.*

<i>Nature of sample.</i>	<i>Result of analysis.</i>
Prescapular gland from frozen lamb (New Zealand) ...	No evidence of tuberculosis or of animal parasites. Haemo-lymph nodes, slightly in excess, but not really abnormal.

(b) *Analyst.*

Twenty samples relating to the arsenical contamination of a cargo of mutton and lamb on S.S. "Cornwall," referred to on page 26.

	Common salt (NaCl) in washings.	Ash.	Silica (SiO ₂)	Microscope.
White beans	·041 %	3·00 %	Nil	Fungal hyphae, capsules and spores, bean starch.
Clean beans	·005 %			
(Fungal contamination and also excess of chloride).				
Rice	... ·037 %	0·37 %	Nil	Fungal hyphae, capsules and spores, rice starch.

Clean rice ... 0·39%

Lunch tongue ... Metals—nil.

Salt	Common Salt (NaCl)	Insoluble residue.	Lead (Pb.)	Arsenic. (As.)
	99·2%	0·43%	nil	Traces
	99·7%	·09%	nil	nil
	99·8%	·06%	nil	nil

	Saponi- fication value.	Iodine number.	Acid value.	Unsaponi- fiable matter.	Melting point.	Boric acid.
Stearine	202·0	22·5	·25	·11	54·5°C.	nil

(The chemical constants accord with the description).

Analyst (contd.).

	Moisture %	Ash %	Fat %	Protein %	Lactose %	Sucrose %	Boric Acid	Formal- dehyde	Colour- ing matter	Milk solids by addition %	Preser- vatives	Total solids
Machine skimmed dried milk powder (animal food).	4.05	8.25	1.04	37.6	48.64	nil	nil	nil	nil			
Skimmed milk powder	2.6	8.3	0.8	39.9	48.9						nil	
Machine skimmed milk		2.3	0.3	9.4	14.4	46.1				26.4	nil	
Machine skimmed milk		2.4	0.23	9.4	14.7	45.7				26.8	nil	
Evaporated milk ...		1.9	9.3	8.4	10.8	nil					nil	30.4
Condensed milk ...		1.9	10.6	8.0	11.5	41.3				32.0	nil	

MISCELLANY.*Parrots (Prohibition of Import) Regulations, 1930.*

Twelve vessels arrived in 1932 with 14 parrots on board. Their importation was prohibited under the regulations. Two of them were destroyed under supervision.

Canal Boat Inspection.

These duties are discharged by the chief port sanitary inspector.

Two boats towed by a motor boat arrived in the district during the year, and were inspected. No women or children were carried on board.

The boats had been registered and the certificates were produced. They were properly marked and there was no overcrowding, and ventilation was sufficient. The cabins required cleansing, and this work was carried out after service of an appropriate notice. Four-gallon stoneware water casks were provided in these boats.

Medical Inspection of Aliens.

Annual return by the medical inspector of aliens for year ended 31st December, 1932.

	Total	Number inspected by the medical inspector	Number subjected to detailed examination by the medical inspector	Certificates Issued					Transmigrants	
				Lunatic idiot or M.D.	Undesirable for medical reasons	Physically incapacitated	Suffering from acute infectious disease	Landing necessary for adequate medical examination	Verminous	Trachoma favius, etc.
1. (a) Total number of Aliens (excluding Alien Seamen) landing at the Port	153	121	11	..	..	..	..	..	..	..
(b) Aliens refused permission to land by Immigration Officer	5	..	..	..	..	..	..	..	..	..
(c) Transmigrants	..	..	..	..	..	..	..	..	..	..
2. Total Aliens arriving at the Port	158	121	11	..	..	..	..	..	..	..
3. (a) Total number of vessels carrying Alien passengers	..	..	65	..	..	..	..	..	..	..
(b) Number of such vessels dealt with by the Medical Inspector	..	..	50	..	..	..	..	..	..	..

TABLE A.

Analysis of Aliens landing (see 1 (a)).		Total		Classification of Aliens referred to the Medical Inspector by the Immigration Officer for detailed examination—					Examined	No. of Certificates Issued.
Residents returning	..	..	10	(i) holding Ministry of Labour permits	..	..	..	..		
In Transit	..	..	69	(ii) intending to take up employment and remain in the country over 3 months ..	..	..	..	..	..	..
Visitors	..	..	61	(iii) intending to make their home in this country	..	..	..	2	..	..
Business	..	..	—	(iv) students coming for educational purposes	..	..	..	4	..	..
Diplomatic	..	..	1	(v) in regard to whom there is any mention of health as a reason for their visit ..	..	..	..	—	..	..
Seamen	..	..	3	(vi) who appear to the I.O. (a) not to be in robust health; (b) to be mentally or physically abnormal or sub-normal; (c) to be dirty in their person or	..	..	..	..	..	..
Contract Seamen	..	..	1	(d) are selected for special reasons	..	..	..	..	..	..
Ministry of Labour Permit (M.L.) :—	..	..	..	(vii) seamen travelling as passengers	..	..	..	1	..	..
(a) Males	..	..	..							
(b) Females	..	..	2							
(c) Children	..	..	4							
Aliens coming to settle not holding M.L. permits :—	..	..	2							
(a) Males	..	..	4							
(b) Females	..	..	2							
(c) Children	..	..	..							
Total	..	..	153					Total	7	..

TABLE B.

The aliens who land at Bristol are almost all first-class passengers, in transit or visitors, from the West Indies, and medically present no difficulties. Those referred for examination are examined on board while the ship is in the locks, and no certificates were issued during the year. No transmigrants arrived in 1932.

INDEX.

	PAGE
Artificial Sunlight Clinic - - - -	26
Baths - - - - -	32
Blind Children - - - - -	37
Cardio-rheumatic Department - - - -	21
Clinics - - - - -	15
Crippling Defects - - - - -	24
Deaf Children - - - - -	36, 37
Defective Vision - - - - -	11, 16
Dentistry - - - - -	20
" Difficult Children " - - - - -	28
Ear Disease - - - - -	12, 18
Employment of Children - - - - -	40
Eye Disease - - - - -	11
Feeble-minded Children - - - - -	34
Feeding of Children - - - - -	32
Following-up - - - - -	14
Heart Disease - - - - -	21
Impetigo - - - - -	11, 19
Infant Welfare - - - - -	20, 28
Infectious Disease - - - - -	12
Medical Inspection - - - - -	9
Medical Treatment of Pre-school Children - - - -	28
Mental Deficiency Act - - - - -	41
Milk in Schools - - - - -	32
Myope School - - - - -	37
Nursery School and Classes - - - - -	38
Open Air Schools - - - - -	29
Orthopaedic Clinic - - - - -	24
Physical Training - - - - -	30
Physically Defective Children - - - - -	35
Ringworm - - - - -	11, 19
Scabies - - - - -	11, 19
School Buildings - - - - -	9
School Camps - - - - -	29
School Nurses - - - - -	14
Secondary Schools - - - - -	39
Squint - - - - -	17
Staff - - - - -	3, 8
Tables—Elementary - - - - -	43—48
Tables—Secondary - - - - -	42
Tonsils and Adenoids - - - - -	10, 21
Treatment - - - - -	15
Tuberculosis - - - - -	11, 21
Uncleanliness - - - - -	10
Voluntary Organizations - - - - -	33

BRISTOL EDUCATION COMMITTEE.

Chairman—Councillor WALTER BRYANT.

Vice-Chairman—Alderman W. H. ACKLAND, J.P.

Hygiene Sub-Committee.

Chairman—Councillor M. GILES, J.P.

Alderman W. H. ACKLAND, J.P.

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T. H. J. UNDERDOWN, Esq., M.A.

Councillor T. THORNTON WILLS.

Director of Education—

W. LUDFORD FREEMAN, M.A., LL.D.

CITY AND COUNTY OF BRISTOL.

Population (estimated Mid. 1931)	...	399,900
Elementary Schools—		
Number of Schools		103
Number of Departments		198
Number on Registers		55,829
Average attendance		50,247

SCHOOL MEDICAL STAFF.

School Medical Officer and Medical Officer of Health.

R. H. PARRY, M.B., B.S. (Lond.), D.P.H.

Chief Assistant School Medical Officer.

A. A. DALBY, M.C., M.R.C.S., L.R.C.P.

Assistant School Medical Officers (Whole-time).

A. F. ALFORD, M.B., Ch.B.

S. F. ALLISON, M.B., Ch.B., D.P.H., (Res. 31.5.32).

I. G. DAVIES, M.B., B.S., M.R.C.P., D.P.H. (Res. 11.7.32).

R. J. TOLEMAN, M.B., B.S., M.R.C.S., L.R.C.P., D.P.H. (Res. 30.9.32).

MONICA A. O'DONOHUE, M.B., Ch.B., B.A.O.

C. P. HAY, M.B., Ch.B., M.R.C.P. (E.), D.P.H.

G. C. KELLY, M.D., Ch.B., B.Sc., D.P.H.

A. R. FORBES, M.B., Ch.B., D.P.H.

Assistant School Medical Officers (Part-time).

ANNIE CORNALL, F.R.C.S.I.
(Res. 31.7.32).

S. B. GREEN, M.B., D.P.H.

Specialist Medical Officers.

Cardio-rheumatic Section - CAREY F. COOMBS, M.D., F.R.C.P.
(Deceased 8.12.32).

Ear, Nose and Throat Section G. R. SCARFF, M.B., F.R.C.S. (E.).

Ophthalmic Section - R. R. GARDEN, M.A., M.B., D.O.M.S., D.P.H.

Orthopaedic Section - HUBERT CHITTY, M.S., F.R.C.S.
K. H. PRIDIE, M.B., B.S., F.R.C.S. (Hon. Asst.
Orthopaedic Surgeon).

X-ray Section - F. G. BERGIN, M.R.C.S., L.R.C.P.

Dental Surgeons (Whole-time.)

W. H. B. STRIDE, L.D.S.

A. LETHABY MORGAN, L.D.S.

MURIEL S. COSH, B.D.S.

MARION BENTZ, L.D.S.

H. HAZELL, L.D.S. (Jointly with the Health Committee).

School Nurses.

L. ELKINS, *Sister Superintendent.*

M. BASSETT

V. P. BOWLER

M. BRADLEY

P. M. COATES

E. M. CORDING

H. L. CROCKER

M. S. DALL

A. G. DAVIES

M. J. DELVIN

E. S. FISHER

L. FOSTER.

F. E. FRY

A. HARVEY (Res. 30.4.32).

M. M. HUNTLEY

W. JOHNSON

D. S. M. LEIGHTON

D. MARSHALL

A. J. QUANCE

A. ROBINS

N. S. TEED (Res. 15.10.32).

D. D. WESTON.

Masseuses and Remedial Gymnasts.

M. ROSSI

B. D. ROBERTSON

C. V. ROBERTSON

Dental Assistants.

E. M. BATTEN

S. WILLS

G. M. NEEDS

M. O. COATES

M. STEPHENS

Clerical Staff.

A. C. J. GREGORY, *Chief Clerk.*

J. H. MIDDLETON

W. H. HAUSER

A. MULLANY

S. I. EDWARDS

IVY M. PORTER

LETITIA POW

ETHEL WEAVER

EMILY F. JONES

G. G. LAING

R. H. F. SAVAGE

SUMMARY OF WORK DONE DURING 1932.

School Medical Officers :—

No. of Visits to Schools	-	-	-	-	784
No. of Children of Code Groups examined in Schools					16,259
No. of Re-examinations in Schools	-	-	-	-	8,002

Dental Surgeons :—

No. of Children examined	-	-	-	-	34,489
No. of Children treated	-	-	-	-	11,142

School Nurses :—

No. of Visits to Schools	-	-	-	-	2,053
No. of Examinations of Children	-	-	-	-	115,831
No. of Homes Visited	-	-	-	-	12,869

SCHOOL CLINICS.

Total Attendances	...	178,755.
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	<i>No. of Attendances.</i>	<i>Work.</i>
Central Clinic ...	32,750	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, zinc ionisation, dental treatment, refraction work, X-ray treatment and treatment of scabies cases.
Bedminster Clinic	40,333	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
St. George Clinic ...	42,002	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
West Bristol Clinic ...	27,883	Inspection clinic work, treatment of minor ailments, ear, nose and throat clinic, dental treatment and refraction work.
North Bristol Clinic ...	11,051	Inspection clinic work, treatment of minor ailments, dental treatment and refraction work.
Redcross St. Spec. School Clinic ...	19,079	Inspection clinic work, treatment of minor ailments, massage, electrical treatment, and remedial exercises.
Tuberculosis Dispensaries ...	3,993	Tuberculosis cases.
Cardio-rheumatic Clinic ...	1,191	Cases of heart disease and acute rheumatic infection.
Artificial Light Clinic	473	Cases of anaemia and debility.

CITY AND COUNTY OF BRISTOL EDUCATION COMMITTEE.

REPORT

OF THE

SCHOOL MEDICAL OFFICER for the year ended
31st December, 1932.

INTRODUCTION.

The report which follows is a short account of the work done by the School Medical Department during another successful year.

I desire to draw special attention to the following :—

Co-ordination of Medical Services.

Excellent co-operation between the various staffs under my supervision has existed throughout the year and has been found to be of great value in increasing the efficiency of the medical services.

A few examples of this co-operation may be given :

- (a) Supervision of children under five at nursery classes and nursery school is carried out by the officers of the Maternity and Child Welfare Department.

In this way the Health Visitors, who are responsible for the domiciliary visits to children under five, become responsible for the nursery school and classes.

- (b) Three of the Assistant School Medical Officers are recognised as Assistant Port Medical Officers and Medical Inspectors of Aliens, and for this purpose take their duty in rotation in the Port during week-ends and render general assistance to the Health Department when required.

This arrangement is popular with the medical officers and in addition to rendering invaluable service to the Corporation it adds interest to their work.

- (c) The Chief Sanitary Inspector is responsible for periodic inspections of schools, and for making suggestions with reference to any improvements that may be necessary.
- (d) The Sister Superintendent is Principal Sister of the out-door nursing services, and her work in bringing together, and preventing overlapping between, the various nursing staffs has been invaluable.

Medical Inspection. (p. 9).

Routine medical inspection has once more demonstrated its usefulness as a means of ascertaining defects and diseases in their early stages amongst the child population. Subsequent "following-up" of the cases assists in making the scheme a success for the prevention of disease. I am informed from reliable sources that the value of the work of the school medical services has become evident in industries by the conspicuous diminution in sickness and in the number of absentees from work. The fall in the incidence of tuberculosis is in part due to the better supervision of the child population. These are obvious benefits and sufficient to commend the maintenance of the service and the development on proper lines, as a scheme which will ultimately result in vast economy in public expenditure on the treatment of disease.

Infectious disease. (p. 12).

A notable feature is the reduction in the number of cases of diphtheria that occurred amongst school children during the year. The figures for the last three years were as follows :—

1930	...	...	947
1931	...	...	494
1932	...	...	342

It may be too early as yet to assess the true value of the immunisation campaign, but these figures seem to indicate some other explanation than coincidence. It is regrettable that it requires the actual presence of the dread disease "in the same street" as it were, before parents turn their minds to the simple and efficient preventive for diphtheria.

Treatment. (p. 15).

It is noted that 8,000 more attendances at clinics were made during the year.

Mr. Garden refers to the fact that in every case, spectacles which had been recommended were obtained.

These and many other facts which can be produced prove beyond doubt the confidence which parents have in the advice given by the various officers of the department.

Aural clinic. (p. 18).

There were 100 fewer children attending this clinic during the year and 200 less suffering from middle ear disease. This is more satisfactory, and is attributed by Mr. Scarff to the clearing up of chronic cases as the result of treatment with iodised boracic powder and by ionisation.

Dental clinics. (p. 20).

Last year it was pointed out that the dental service was far from meeting the need of the school children. With pleasure one notes that the number of cases seen and treated has greatly increased during 1932.

Provision of meals. (p. 32).

Owing to the prevalence of unemployment, 50,000 more free dinners were granted during 1932 than in the previous year—this was in addition to free milk meals.

Nursery school and classes. (p. 38).

Special attention is directed to the excellent work done for pre-school children at these institutions.

The death of Dr. Carey Coombs was indeed a sad loss to the service and to the medical profession. The record of the admirable work in which he had spent his life—the prevention and treatment of heart disease—is a fitting monument to his great personality.

My best thanks are due to Dr. W. Ludford Freeman, Director of Education, for his ever-ready help, and also to the Head Teachers, without whose assistance it would have been impossible to carry out the work.

I wish to record my appreciation of the excellent work performed by the staff. The report that follows has been collated by Dr. A. A. Dalby with the assistance of the Chief Clerk, Mr. A. C. J. Gregory.

R. H. PARRY,

School Medical Officer.

I.—STAFF.

A considerable number of changes occurred in the Staff during the year. Dr. S. F. Allison resigned on 31st May, Dr. I. G. Davies on 11th July, and Dr. R. J. Toleman on 30th September. These vacancies were filled by the appointment of Dr. C. P. Hay on 2nd August, Dr. G. C. Kelly on 20th August and Dr. A. R. Forbes on 29th September.

Dr. Annie Cornall relinquished her appointment as part-time Assistant School Medical Officer on 31st July after many years of valuable work, particularly in respect of the medical inspection of girls in Secondary Schools.

The Department suffered a severe loss in December by the death of Dr. Carey F. Coombs, whose work in connection with the Cardio-rheumatic clinic has been of incalculable benefit to Bristol school children.

The Education Committee—jointly with the Health Committee—appointed Mr. H. Hazell, L.D.S., in February, his services to be divided between these two bodies.

Two school nurses resigned—Mrs. A. Harvey and Miss N. S. Teed. They were replaced by Miss V. P. Bowler and Miss A. G. Davies, who commenced duty on 1st May and 1st November respectively.

Miss M. Stephens was appointed dental attendant to Mr. Hazell in February.

II.—CO-ORDINATION OF HEALTH SERVICES.

The scheme of co-ordinating the health services has worked smoothly and efficiently during the year.

In addition to that at the Nursery School, medical inspection at Castle Green Nursery Class has been taken over by Dr. M. G. Hughes, Maternity and Child Welfare Dept.

The Chief Sanitary Inspector renders a periodic report on the sanitation of schools in the Bristol area for the information of the School Medical Officer.

Arrangements exist between the Education and Health Committees whereby children of pre-school age may be referred by the Maternity and Child Welfare Department to school clinics for the treatment of certain defects and diseases. Details of this scheme are given later in the Report in Section VIII.

III.—HYGIENE OF SCHOOL PREMISES.

Any defects discovered in schools by the School Medical Officer or his staff are reported to and remedied by the Sites and Buildings Department.

During the year the following new school departments have been opened :—

Connaught Road (Junior Mixed and Infants').

Bedminster Down (Junior Mixed).

Portway (Senior Boys' and Senior Girls').

St. Anne's Park (Senior Girls').

IV.—MEDICAL INSPECTION.

(a) Arrangements for Inspection.

Except in the case of five Schools which have no suitable accommodation, the routine medical inspection of children is held on the school premises. The Head Teachers co-operate in the work very willingly, and their help is much appreciated.

A Nurse visits the school a few days before the Doctor is due, and enters details of height, weight and vision of the selected children on record cards. The Head Teacher sends a printed notice to all parents, stating date and time of the inspection, and inviting their attendance. The presence of the parents is most valuable, for not only can the Doctor obtain much useful information about the child, the family history, etc., but he has an opportunity of giving directly any required advice to the parent.

The schedule of medical inspection approved by the Board is followed.

(b) Groups Inspected.

The three code groups examined are :—

- (a) *Entrants*—children who first entered school within the previous twelve months.
- (b) *Intermediates*—children between the ages of eight and nine years.
- (c) *Leavers*—children who have reached the age of twelve years.

Special cases are brought to the Doctor's notice during his visit to the schools, and re-examinations are made of children noted as having defects or ailments at a previous routine inspection.

In addition to the above, children aged fourteen years who are in attendance at Central Schools are now given a routine medical examination.

V.—FINDINGS OF MEDICAL INSPECTION.

A complete medical inspection was made of 16,259 children in the usual three age groups during 1932, and 24,489 were examined because of some special defect. In addition, 57 children (aged 14) were examined who were in attendance at the Central Schools.

(a) Uncleanliness.

The School Nurses and Head Teachers have done splendid work in reducing the number of verminous cases found amongst school children, and one does not often find nowadays a really bad verminous head or scalp covered with impetigo. Minor cases of dirty heads are still numerous, but these are very much easier to deal with since the hair of girls is generally kept shorter now, and special combs have been introduced for the purpose of removing nits.

(b) Enlarged Tonsils and Adenoids.

2,137 children were found to be suffering from the above. Of these, 1,427 were recommended for treatment, while in 710 cases the defect was not considered sufficiently serious to require operation. These latter children are being kept under observation, and each case will be re-examined later by the Doctor. 1,106 other cases of disease of the nose and throat were found.

(c) Tuberculosis, etc.

1,030 children were examined by the Tuberculosis Officer. Of these 577 were old cases and 453 new cases, and of the latter, 35 were classified as definite pulmonary tuberculosis, 23 as cases of involvement of the hilar glands, stigmata, etc., 6 as suspected tuberculosis and 389 as non-tubercular. Co-operation between the officers of different departments is encouraged and found to be invaluable to all concerned.

(d) Skin Diseases.

(1) *Ringworm*. The following Table gives detailed information in regard to this disease.

	<i>Scalp.</i>	<i>Body.</i>
New cases found in 1932 ...	75	151
Cases brought forward from 1931 ...	13	3
	—	—
	88	154
	—	—

For further details see page 19.

(2) *Scabies*. There were 114 cases of scabies (or itch) among Elementary School children during the year. Nine of these cases were carried over from 1931.

(3) *Impetigo*. There were 2,745 cases of impetigo found among the children examined during the year.

(4) *Other Skin Diseases*. The above constitute the three commonest skin diseases of children. Other varieties of skin ailments amounted to 1,027 cases.

(e) External Eye Diseases.

1,200 cases of external eye disease were recorded. A great proportion of these were cases of conjunctivitis and blepharitis, conditions requiring regular treatment and likely to lead to serious damage to the eye if neglected.

(f) Vision.

The refraction of 3,007 cases of defective vision was worked out during the year, this number including a number of re-examinations of children already wearing glasses. Children with even very slight degrees of myopia are re-tested at intervals of twelve months.

(g) Ear Disease and Hearing.

1,248 cases of ear disease, including cases of defective hearing, were noted, and of these 734 were suffering from definite otitis media.

VI.—INFECTIOUS DISEASE.

The number of cases of diphtheria occurring in children of school age showed a further fall during 1932. There were 342 cases notified during the year as compared with 494 in 1931. The number of deaths from this disease also showed a decrease, being 11, as against 13 in the previous year.

It is regrettable to have to report a further decline in the support given by parents to the Health Committee's scheme for the immunisation of children against diphtheria. The number of children who received the full immunising course has fallen from 5,485 in 1930 and 3,098 in 1931, to 1,270 during 1932. The complete figures for the year are as follows :—

Number received full course of immunising inoculations	1,270
Number Schick tested after immunising course	... 1,247
Number of observations	 1,188

Results :—

Negative	...	...	468	}	...	1,188
Pseudo-negative	...	...	2			
Faint positive	...	...	43			
Positive	...	...	484			
Positive +	...	...	190			
Positive + +	...	...	1			

In addition, 52 children over ten years of age, were Schick-tested, with the following results :—

Negative	...	...	12
Positive	...	...	36
Not observed	...	...	4

The 36 children who showed a positive re-action were subsequently given a course of immunisation.

For the first nine months of the year the incidence of scarlet fever was low, but 234 cases were notified during the last quarter.

There were comparatively few cases of measles, but chicken-pox was rife throughout the year. Whooping cough was prevalent during the first half of 1932, but there was a marked decrease in the number of cases reported in the second half.

An epidemic of mumps broke out in the last quarter of the year, during which 536 cases were reported.

The following Table gives details of notifiable and non-notifiable infectious diseases for the year :—

A.—CASES OF NOTIFIABLE INFECTIOUS DISEASES AMONGST SCHOOL CHILDREN,
WITH CONTACTS.

1932.	Cerebro-Spinal Fever.		Polio- encephalitis and Poliomyelitis.		Scarlet Fever.		Diphtheria.		Encephalitis Lethargica.	
	Cases	Contacts	Cases	Contacts	Cases	Contacts	Cases	Contacts	Cases	Contacts
1st Quarter	4	15	—	—	70	92	86	171	—	—
2nd Quarter	1	8	—	—	70	118	41	106	—	—
3rd Quarter	1	1	1	3	64	152	65	138	—	—
4th Quarter	—	—	—	2	234	334	150	274	2	7
	6	24	1	5	438	696	342	689	2	7

CASES OF NON-NOTIFIABLE INFECTIOUS DISEASES AMONGST SCHOOL CHILDREN.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.
Whooping Cough ..	138	509	58	27	732
Chicken Pox ..	291	333	156	289	1,069
Mumps ..	102	191	127	536	956
Measles ..	15	50	43	40	148
German Measles ..	1	1	2	5	9
	547	1,084	386	897	2,914

B.—1932.

Cause of Death (Ages 5-15).						
Scarlet Fever ..	..	..	..	..	..	2
Diphtheria and Croup ..	..	..	..	..	..	11
Influenza ..	..	..	..	..	..	2
Encephalitis Lethargica ..	..	..	..	..	..	1
Cerebro-spinal Fever ..	..	..	..	..	..	4
Tuberculosis of Respiratory System ..	..	..	..	..	..	4
Other Tuberculous Diseases ..	..	..	..	..	..	2
Cancer and Malignant Disease ..	..	..	..	..	..	2
Diabetes ..	..	..	..	..	..	1
Heart Disease ..	..	..	..	..	..	1
Pneumonia (all forms) ..	..	..	..	..	..	5
Rheumatic Fever ..	..	..	..	..	..	10
Appendicitis ..	..	..	..	..	..	9
Digestive Diseases ..	..	..	..	..	..	4
Congenital Debility and Malformation ..	..	..	..	..	..	2
Violent Deaths ..	..	..	..	..	..	12
Other Diseases ..	..	..	..	..	..	12
All Causes ..						84

VII.—FOLLOWING-UP.

The various defects found in the course of routine examinations are notified to the parents at the time of inspection, and by a written intimation from the Medical Department within a few days. The necessity for treatment is pointed out, and the parents encouraged in every way to seek the advice of the family Doctor.

After a short interval, a report is received from the Head Teacher, and if no action has been taken by the parents, a Nurse calls at the home at least once and makes every effort to ensure that the School Medical Officer's advice has been followed. The procedure outlined above has in some cases to be repeated several times, but there is a growing tendency of the part of parents to take earlier action than used to be the case.

SCHOOL NURSES.

The work of the School Nurse is one of the most important parts of the Medical Service. Her time is divided between the clinics, the schools, and the homes of the children. The following summary gives some idea of the scope and nature of her duties :—

(1) Work in School Clinics.

In addition to the general inspection work, each clinic has several special departments in which a variety of specialized forms of treatment has to be carried out under the direction of the doctors in charge of the different branches. The special forms of treatment are used chiefly for chronic ailments of the skin, ear, and eye, and the cases dealt with can rarely be treated satisfactorily at home.

(2) Work in Schools.

Some days before the Doctor's visit, children due for examination are weighed, measured and tested as to visual acuity. In this way a definite saving of time is effected, and the Doctor is enabled to devote more time to the individual child. 834 visits were paid to schools in connection with these duties last year.

With regard to verminous conditions, skin diseases and general neglect, in the course of 1,219 visits to schools 115,831 examinations of children were made including 9,542 re-examinations of children found to require attention on a previous occasion.

In this work the Nurse and Head Teacher act in close co-operation, and we are greatly indebted to the Teachers for their valuable assistance in this matter.

(3) Home-visiting.

In many cases, the parents do not accompany their children to clinic or medical inspection, and large numbers of visits have to be made at the homes for the purpose of interviewing them. Every effort is made in this way to encourage and assist them in obtaining treatment for ailments discovered in their children. During the year, the number of visits was 12,869.

VIII.—TREATMENT.

Five Clinics, the Central, St. George, Bedminster, West Bristol and North Bristol, serve the schools in their respective areas, and have been in full working during the year. Each clinic has an Assistant School Medical Officer in charge, and is also visited by certain Specialists who attend at regular intervals.

At the Central Clinic, in addition to the provision of general treatment for the schools in the surrounding area, X-ray treatment and the bathing of scabies cases is carried out for the entire City.

The St. George, Bedminster, West Bristol and North Bristol Clinics are general treatment and dental clinics for their respective districts.

Clinic work is going on all day, including Saturday mornings in the Central, Bedminster and St. George districts. At the West Bristol and North Bristol Clinics, a general inspection clinic is held on two afternoons weekly, and treatment is carried out every morning session.

All the clinics have now been equipped for refraction work and cases are examined and glasses prescribed by the School Medical Officers.

The Committee's Aural Surgeon has charge of the ear, nose and throat cases and attends four clinics. Zinc ionisation for the treatment of chronic middle ear disease is carried out under his supervision at the Central Clinic.

The Orthopaedic Clinic is situated at Redcross Street School and deals with cases from the whole City, including children under five.

Cases of acute rheumatic infection in any form and also of non-rheumatic heart disease attend the clinic which has been established in the University Centre of Cardiac Research at Bristol General Hospital.

Tubercular children attend the Municipal Tuberculosis Dispensaries.

The total number of attendances at clinics during the year was 178,755.

(a) Eye Clinics.

Mr. R. R. Garden, M.B., D.O.M.S. (Lond.), the Ophthalmic Surgeon, reports as follows :—

“ In the Report for last year, an outline was given of the re-organisation which had taken place in the Eye Department. All refraction work is now carried out at the School Clinics, and a considerable number of cases are dealt with by the Committee's Assistant Medical Officers, who have been trained in the detection and treatment of refractive errors.

This arrangement has been working smoothly and satisfactorily throughout the year. The children can now be seen at the clinic nearest to their homes, and in this way a considerable amount of time is saved, from the point of view of both teachers and parents.

Another feature of the scheme, which saves time and also travelling expenses to the parents, is the arrangement whereby a member of the optician's staff attends every refraction session at the clinics for the purpose of fitting spectacles, adjusting frames, and obtaining signatures to agreements for payment. There is no doubt that this is proving a great convenience to all concerned.

We continue to see very early cases of defective sight referred from the Infants' Schools, and we appreciate the assistance given by Teachers in developing this most valuable side of the work.

Myopic cases, even minor degrees, are examined once a year, or oftener if necessary. In the more marked cases (if not recommended for admission to the Myope School), leaflets of advice are issued for the guidance of parents and teachers.

In regard to the treatment of squint, every effort is made to obtain cases in their earliest stages, and we are indebted to the Maternity and Child Welfare Department for bringing to notice many squinting children under school age.

During 1932, a total of 3,007 refraction cases was completed at the clinics, while 26 were tested and glasses ordered by opticians. In 423 cases, spectacles were not required, but where necessary a number of these are kept under observation at school, and summoned after six or twelve months for re-examination.

Spectacles were ordered for 1,983 children, and it is satisfactory to note that in every case the spectacles were obtained.

A total of 149 new squint cases and of 279 others seen in previous years, but still under observation or treatment, attended the clinics during 1932. Of the new cases, 94 were under school age, and were mostly referred by the Child Welfare Department.

The treatment of external eye diseases is also undertaken at the clinics, and last year the total of attendances made by these cases was 7,585."

Provision of Spectacles.

The glasses are supplied at a contract price by the Committee's opticians. When the parents cannot pay the amount due at once, arrangements are made for instalments which are collected by the Attendance Officers.

Spectacles obtained through School Medical Officer ...	1,278
Purchased privately by parents	684
Supplied by Public Assistance Committee	21
	1,983

In addition to the above, 460 minor repairs were undertaken.

In necessitous cases, the cost is partly or wholly remitted at the discretion of the School Medical Officer, after inquiry into the circumstances. The expense of these remissions is partly recovered from charitable sources, as shown by the following :—

Cost of Spectacles	£405	4	9
Amount received from Royal Surgical Aid Society (to 17th June, 1932)	42	4	4
Amount received from parents	285	9	11

(b) Aural Clinics.

Regular visits are paid to four clinics by the Aural Surgeon, who makes a complete investigation in each case. Almost invariably, a parent attends with the child, and any abnormal condition discovered is explained at the time. When operative treatment is required, printed instructions are given with information as to the days and times when this can be arranged at one of the voluntary institutions.

Practically all cases of chronic ear disease are now treated at the Committee's clinics. Satisfactory attention can rarely be given at home, and for the treatment of ailments such as these the school clinic is admirably suited. The Central Clinic is equipped with two batteries for zinc ionisation of cases with middle ear suppuration.

Mr. Gordon R. Scarff, F.R.C.S. (Ed.), the Aural Surgeon, reports as follows :—

“ During the past year the number of children attending the clinic was 973, of whom 612 were suffering from middle ear disease, and 361 from other diseases of the ear, nose and throat including 36 pre-school children. In a considerable number of these cases there was a focus of infection in the nose or throat, and such cases were referred to Hospitals for appropriate treatment.

At the Central Clinic treatment weekly by zinc ionisation in cases of middle ear suppuration has been continued in selected chronic cases. The number of treatments given during the year by this method has been 410, the number of patients treated being 82, of whom 40 have been discharged with dry ears and healed tympanic membranes. This proportion of cures is the same as last year's, and is very satisfactory.

Treatment by iodised boracic powder has been continued, and, with the exception of ionisation, has been the only method used during the past year. Here again the results have been very satisfactory, and a considerable number of cures has been effected in cases where the child has been under treatment for aural discharge for three or more years. The clearing up of these chronic cases is, to a large extent, responsible for the drop in the number of cases treated, as compared with the previous year.”

(c) Skin Clinics.

(1) *Scalp Ringworm*. 88 cases of scalp ringworm were dealt with during the year. Of these, 75 were new cases, and 13 cases were carried over from 1931. Of the above, 86 were treated at the Committee's clinics and 2 otherwise.

X-ray Treatment.

Dr. F. Gower Bergin, who is in charge of this Department, reports as follows :—

“It should be noted with regard to the 88 cases of scalp ringworm mentioned above, that 21 of them were doubtful ones or cleared up after a short period of local treatment. Of the remainder 42 were treated by X-rays.

This form of treatment seems to be keeping the disease well under control, there being only 12 cases on the books on 1st January, 1933. It is unlikely that this low figure will be much further reduced, since a number of cases are bound to come into the city from surrounding districts.

Thirty-six cases from other committees, outside authorities, etc., have received X-ray treatment at this clinic.”

The following table shows the number of cases on the books on 1st January in :—

1924	...	...	120
1927	...	...	30
1930	...	...	16
1933	...	...	12

(2) *Body Ringworm*. During 1932 there were 154 cases of this disease under observation, of which 3 were carried over from the previous year. All of these were treated at the school clinics.

(3) *Impetigo*. The school clinics treated 2,744 cases of impetigo during the year, a rapid cure being effected in all cases.

(4) *Scabies*. The bathing of children suffering from itch was carried out during the year at the Central Clinic on the lines described in previous reports. Ninety cases were treated, 192 baths being given. The number of children excluded from school suffering from this complaint was 114.

(d) Dental Clinics.

There are four whole-time dentists at the Central, Bedminster, St. George and West Bristol Clinics, while at North Bristol, Mr. Hazell, who is appointed jointly by the Health and Education Committees, devotes seven sessions a week to the inspection and treatment of children in that district.

Children are examined at the age when the permanent teeth begin to appear and in each subsequent year. This scheme, which is recommended by the Board, is adhered to as far as possible, and a number of urgent cases at other ages is also treated.

The following Table gives details of the work done by the whole-time dentists during the year :—

No. of children inspected	...	...	...	...	34,489
No. of children referred for treatment	...	...	...	...	28,402
No. of children actually treated	...	...	...	...	11,142
No. of teeth extracted	Permanent Temporary				26,507
		...	4,301		
		...	22,206		
No. of teeth filled	...	...	...	...	6,296
No. of anaesthetics (local)	...	...	...	...	6,842
No. of anaesthetics (general)	...	...	...	...	5,786
No. of other operations	...	...	...	...	805
No. of attendances for treatment	...	...	...	...	21,737

Every endeavour has been made to increase the amount of conservative treatment and it is noteworthy that the number of teeth filled this year is 6,296, as against 3,657 in 1931.

The dental treatment of mothers and young children under the joint scheme of the Education Committee and the Maternity and Child Welfare Committee was carried on throughout the year, and particulars of the work done are given below :—

	<i>Mothers.</i>		<i>Young Children.</i>
No. summoned	...	350	917
No. attended	...	305	632
No. inspected	...	305	631
No. treated	...	277	591
No. of attendances	...	975	1,396

The above work occupied 202 sessions of the Dental Surgeons' time, and 2,371 attendances were made. In 151 cases, mothers were fitted with dentures on the recommendation of the Dental Surgeons. It is noteworthy that the attendances of young children increased from 584 in 1929 to 1,396 in 1932.

(e) Minor Ailments.

A very large number of miscellaneous cases was treated at the school clinics. These include various surgical dressings of a minor character, etc., and also various ailments that do not come under any of the above headings.

(f) Defects of Nose and Throat.

The number of children found suffering from the above ailments was 2,439, of which 962 received treatment. Operative treatment of enlarged tonsils and adenoids is done at the various City Hospitals, 475 cases being so treated.

(g) Tuberculosis.

During the year 101 children were discharged from Sanatoria under the Health Committee's Scheme, after an average period of 187·3 days treatment.

The number of attendances of children at the Tuberculosis Dispensaries was 3,993.

(h) Heart Disease.

Dr. C. Bruce Perry, reports :—

“ All children in whom signs suspicious of heart disease are found by the school medical officers are referred for examination at the heart clinic. This clinic has been carried on by Dr. Carey Coombs and Dr. Bruce Perry at the University Centre of Cardiac Research at the Bristol General Hospital. A certain number of children are also referred to the clinic by general practitioners for advice as to fitness for school. The clinic suffered a serious loss this year by the untimely death of Dr. Carey Coombs in December. The successful and smooth working which has characterised the work of the clinic since its inception five years ago is almost entirely the result of his indefatigable enthusiasm and energy.

The diagnosis arrived at as a result of the examination at the clinic is reported to the school medical officers together with a recommendation as to the form of treatment required. A copy of this report is sent to the patient's family doctor. Children requiring treatment at home are advised to consult their own doctor or to obtain treatment at one of the Institutions, according to their financial ability. One of the most pressing difficulties at the clinic at the moment is the problem of the child with active infection. As was pointed out last year such children require prolonged rest if they are to make a good recovery. For this, school hospitals are almost essential. Winford Orthopaedic Hospital provides twenty beds, but unfortunately the accommodation is very inadequate for present requirements since 79 children were considered to be in need of active treatment last year. Another difficulty is that of finding suitable employment for the children on leaving school. Many of them are perfectly fit for work in factories but are debarred from so doing. The result is that unless great care is exercised they drift into more easily obtained laborious work.

The value of the clinic in preventing the unnecessary restriction of those children suspected of heart disease is shown by the fact that of the 232 new children examined during the year 102 were found to have no organic heart disease, of whom 95 needed no treatment or restriction. The clinic is also useful in the opportunity it provides for clinical research. The following paper has been published during last year.

“ Discussion on Some Problems concerning the Prevention and Treatment of Acute Rheumatic Infection by Carey F. Coombs. Proceedings of the Royal Society of Medicine, September, 1932.”

During 1932, 232 new cases have attended the Cardiac Clinic, and 959 re-examinations have been made, making the total number of attendances 1,191. The following Table shows how the cases have been dealt with :—

SUMMARY OF CASES ATTENDING CARDIO-RHEUMATIC CLINIC.

	No treatment or restriction.	No treatment, but restriction of games.	Treatment, and attend school.	Treatment, and exclude from school.	Institutional treatment.	TOTAL.
NEW CASES.						
Rheumatic Heart Disease	28	29	20	9	10	96
No Organic Disease	95	2	4	1	—	102
Congenital Heart Disease	27	3	1	1	—	32
Doubtful	1	1	—	—	—	2
	151	35	25	11	10	232
RE-EXAMINATIONS.						
Rheumatic Heart Disease	295	192	117	39	12	655
No Organic Disease	171	—	2	1	—	174
Congenital	94	9	4	3	2	112
Various	9	7	1	1	—	18
	569	208	124	44	14	959

No. of individual children examined ... 955
 No. of new cases for 1932 ... 232
 No. of re-examinations ... 959
 Total No. of attendances ... 1,191

(i) Crippling Defects.

The provision of treatment for cases of surgical tuberculosis in school children is the responsibility of the Health Committee, and accommodation is available at Frenchay Park Sanatorium for those requiring in-patient treatment. In regard to children with other crippling ailments such as infantile paralysis, congenital defects and heart disease there is accommodation for sixty cases at Winford Hospital School.

The Education Committee's Orthopaedic Clinic is situated in Redcross Street School, and the staff is kept very busy in treating the large number of cripples attending the school, and also cases under school age, the latter being mostly sent on from the various infant welfare clinics of the city.

The Nurse in attendance is qualified in Massage and Medical Electricity, and is assisted by two masseuses, who in addition hold certificates for Remedial Exercises. The Clinic is equipped with the most up-to-date electrical and gymnastic apparatus for orthopaedic work, and practically any form of specialized treatment ordered by the Surgeon can be given on the premises.

Mr. Hubert Chitty, M.S., F.R.C.S., is the Orthopaedic Surgeon in charge of this Centre, and his report is as follows :—

“Attendances at the Redcross Street Clinic again show a considerable increase this year.

The number of children medically examined was 1,522 and of these 612 were new cases. 71 of these were under school age. Health visitors are encouraged to send such cases to the clinic as the earlier a crippling disease is treated the greater is the probability of effecting a cure.

Attendances at the remedial clinic totalled 7,775. The results of treatment are most encouraging.

Without the assistance of Mr. Kenneth Pridie, F.R.C.S., I should find it impossible to cope with all the work which this department now entails.

Many of the parents are very appreciative of the benefits which their children have obtained.”

The following Table shows the various ailments found amongst the new patients seen :—

	<i>Age 5 and over.</i>	<i>Under age 5.</i>
Paralysis : (a) Flaccid	101	7
(b) Spastic	34	9
Tuberculosis of Bones and Joints	34	—
Congenital abnormalities of Bones and Joints	36	3
Amputations	4	—
Rickets	14	33
Various (flat-foot, spinal curvature, etc.)	318	19
	541	71
	—	—

In addition to the above, 910 re-examinations were made during the twelve months.

The operations performed at Winford or one of the City Hospitals were as follows :—

Osteotomy	18
Tenotomy	10
Tendon slinging	4
Arthrodesis	8
For tuberculous abscess	5
Division of obturator nerve	1
For hammer toes	5
For torticollis	3
For rickets	6
Wrenching and plaster	1
Excision of Keloid	2
Hallux Valgus	2
For Scoliosis	4
Paring down of External Malleolus	2
Bone Graft	1
Cleft Palate	1
For Removal of Exostosis	1
Ganglion of Wrist	1

The provision and maintenance of surgical boots and appliances is a most important matter at a clinic of this kind, and during the year 370 recommendations were dealt with through the agency of the School Medical Officer. Part of the cost is borne by the parent, part by the Bristol Crippled Children's Society and other charitable sources, the deficit being made up by the Education Committee.

(j) Artificial Sunlight Clinic.

Dr. Marguerite Hughes, Chief Assist. to the Maternity and Child Welfare Department, who is in charge of this clinic, reports as follows :—

During 1932, 29 children of school age were given artificial sunlight treatment. Full details of the cases are given below :—

Group A. Debility following illness.

1. Number of cases treated	...	11.
2. Type of Lamp used	...	Quartz Mercury Vapour Lamp.
(a) Period of treatment	...	2 Courses, extending over 6 months
(b) Number of Doses	...	12 doses.
(c) Strength of dose	...	Gradually increasing 1 minute to 12 minutes.
3. Other forms of auxiliary treatment	...	Tonics.
4. Progress as regards general health		General condition improved in 9 cases, with satisfactory gain in height and weight. Other 2 cases remained with no obvious improvement.
5. Progress as regards special symptoms.		Appetite, sleep, vitality and general health improved.
6. Any unfavourable symptoms		None.
7. General conclusion as to effect of treatment.		Shows excellent results.

Group B. Cervical Adenitis.

1. Number of cases treated	...	10.
2. Type of Lamp used	...	Quartz Mercury Vapour Lamp.
(a) Period of treatment	...	3 Courses—9 months. Varying from 2-5 Courses.
(b) No. of doses	...	12 doses.
(c) Strength of dose	...	1 minute increasing to 12.
3. Other forms of auxiliary treatment.		Dental extractions in 2 cases. Tonics in other cases. Non-attendance at school in 1 case.
4. Progress as regards general health.		General improvement in health with gain in weight and height.

- | | |
|--|---|
| 5. Progress as regards special symptoms. | 6 cases showed good local improvement in glandular condition—other four cases remained unchanged. |
| 6. Any unfavourable symptoms... | None. |
| 7. General conclusion as to effect of treatment. | General health improved under treatment but concurrent treatment of naso-pharyngeal and dental conditions is desirable. |

Group C. Anaemia.

- | | |
|--|--|
| 1. Number of cases treated ... | 1. |
| 2. Type of Lamp used ... | Quartz Mercury Vapour Lamp. |
| (a) Period of treatment ... | 3 Courses—9 months. |
| (b) No. of doses ... | 12 doses. |
| (c) Strength of Dose ... | 1 to 12 minutes. |
| 3. Other forms of auxiliary treatment. | Tonics and non-attendance at school for about 3 months. |
| 4. Progress as regards general health. | General health remained good, sleep and appetite was satisfactory. Gain in weight only 6 ounces, and gain in height about 1½ inches in 9 months. |
| 5. Progress as regards special symptoms. | Condition as regards anaemic appearance remained unchanged. |
| 6. Any unfavourable symptoms... | None. |
| 7. General conclusion as to effect of treatment. | Number of cases insufficient upon which to base any conclusion. |

Group D. Bronchitis and Asthma.

- | | |
|--|--|
| 1. Number of cases treated ... | 5. |
| 2. Type of Lamp used ... | Quartz Mercury Vapour Lamp. |
| (a) Period of treatment ... | Treatment is usually extended over a longer period, i.e., 2-5 Courses. |
| (b) No. of doses ... | 12 doses. |
| (c) Strength of dose ... | 1-12 minutes. |
| 3. Other forms of auxiliary treatment. | Medicinal treatment. |
| 4. Progress as regards general health. | Good improvement in general health with satisfactory gain in weight, especially marked while treatment was being received. |
| 5. Progress as regards special symptoms. | Attacks of bronchitis diminished, especially during course of treatment. |
| 6. Any unfavourable symptoms... | None. |
| 7. General conclusion as to effect of treatment. | Treatment is beneficial in these cases, but requires to be extended over a longer period. |

Remaining Cases.

1. Ichthyosis	1.
Septic spots	1.
2. Type of Lamp used ...	Quartz Mercury Vapour Lamp.
3. Other forms of auxiliary treatment.	Tonics and local applications.
4. Progress as regards general health.	General health remained good.
5. Progress as regards special symptoms.	Local condition showed improvement.
6. Any unfavourable symptoms...	None.
7. General conclusion as to effect of treatment.	Number insufficient upon which to base conclusions.

(k) Clinic for "Difficult Children."

Dr. A. A. Dalby reports :—

"The work and progress of this clinic has been very materially interrupted by the resignation of Dr. S. F. Allison, and by that of Dr. I. G. Davies, who, it was intended, should have succeeded him.

However, fourteen cases were investigated during the year, being referred by Head Teachers or parents. All these children were of normal, or only slightly retarded intelligence, and so proved to be of a suitable type for this kind of clinic. The irregularities of conduct were in eight cases, anti-social conduct either at home or at school, whilst the others included cases of wandering, persistent truancy and outbreaks of violent temper.

In the majority of the eight cases of anti-social conduct the difficulty was found in the home environment, and by a certain amount of parental education very considerable improvement was achieved.

In the other cases also, investigation showed a method of dealing effectively with the trouble, with one exception which must be regarded as a failure, although there is reason to suspect the condition to be post-encephalitic."

(l) Medical Treatment of the Pre-School Child.

Children under five years of age may be examined and treated at School clinics when reported by the Maternity and Child Welfare Department.

Any cases of squint, adenoids, dental decay, or crippling defect, are notified direct to the School Medical Officer and the parents are then asked to bring these children to appropriate specialists for examination. Details of these cases are given in the reports in Section VIII, pars. (a), (b), (d), and (i).

The Health Visitors are provided with cards by means of which cases of diseases of the eyes, ears, skin and minor ailments can be referred to the clinic for the district.

The following cases were dealt with in this way during the year :

Eye disease	...	...	...	15
Otorrhoea ...	...	...	...	77
Skin diseases	...	...	...	119
Minor ailments	...	...	...	95
Various	...	...	...	34

				340

IX.—OPEN AIR EDUCATION.

(a) School Camps.

Several elementary schools held small camps during the summer.

(b) Day Open Air Schools.

(1) *Knowle Open Air School.* The delicate and convalescent children who attend this school are recommended by the medical staff of the Corporation, and by doctors at the Bristol Hospitals or in private practice. One of the School Medical Officers visits the school every week to examine special cases and ensure that each child is inspected at least once every six months. A nurse is in attendance all day for the purpose of treating minor ailments, supervising meals, etc. One afternoon a week is devoted to home visits.

Dental treatment is carried out by one of the Committee's dentists.

During 1932, the figures for the School were as follows :—

No. of admissions	...	...	...	...	47
No. of re-admissions	...	...	...	...	4
No. discharged fit for work	...	...	...	...	16
No. discharged fit for ordinary school	...	...	...	...	42
No. discharged for other reasons	...	...	...	...	5
					—
					63
					—
No. on registers at end of 1932	...	...	...	...	132
Average attendance	...	...	...	...	123·7

(2) *Park Classes.* In St. George, Eastville and Bedminster Parks, classes for delicate children are held in the bandstands all the year round. The classes are conducted on similar lines to those of Knowle Open Air School, and have the advantage of being near to the homes of the children.

	<i>Bed-</i> <i>minster.</i>	<i>East-</i> <i>ville.</i>	<i>St.</i> <i>George.</i>
No. on the Registers at the end of 1932	23	25	25
Average attendance for the year	... 21·2	23	21·1

X.—PHYSICAL INSTRUCTION.

The closest co-operation exists between the School Medical Officer and the Superintendent of Physical Instruction. Children unfit for games and exercises, or requiring modifications of these are notified to the Physical Instruction Department, and in the cases of spinal curvature, flat-foot, etc., occurring among students in Secondary Schools special remedial exercises are given.

The Superintendent of Physical Instruction, Major C. P. Rea, D.S.O., reports as follows :—

“ There has been no change in the systematic training given in Physical Instruction in the schools except in the newly organised senior schools at Portway, St. Anne’s and Knowle Park. Here the inclusion of a hall, placed in a secluded position, has enabled a more developed type of work to be introduced. Portable apparatus has been included in the general school equipment so that the children have the opportunity of taking work of a much more

athletic and active character. The apparatus is light and easily lifted and so can be used in the playground when weather permits. The only difficulty has been to obtain proper shoes and clothing.

Organised games are played by all schools, and inter-school matches increase in number each year. The value of these is immense, not only on account of the social intercourse that ensues, but because they are an incentive to the improvement of the standard of play—and they are of still greater value if those in charge remember that the largest possible number of children should be trained to take their places on the field and not a selected few.

Another outcome of this systematic training in the Elementary and Secondary Schools is that Bristol for years has had a representative in all the International games of Rugby and Association Football, and every year now boys from Bristol are included in the International Boys' match for the same games.

It is regrettable that, through lack of field space, schools in the Two Mile Hill district are unable to take organised games off the premises. In addition, owing to their distance from the baths, the children receive no training in swimming.

The entries for the events organised by the Schools Athletic Association (which is self supporting) numbered 14,000. Over 2,000 children took part in the finals held at the County Cricket Ground.

Play centres, which are closed from 1st April to 1st October, continue to fulfil their useful purpose during the winter months and are well attended in the populous districts.

Tuition in swimming is arranged so that all children, unless medically unfit, receive a season's coaching in swimming in Std. V. Voluntary practice classes in swimming and instruction classes in life saving out of school hours, are provided by the Authority. The examination results in swimming are the highest yet recorded. Teachers and children have received special commendation from the Baths Committee.

No. of children taught to swim	...	...	3,010
No. of Corporation Certificates awarded	...	...	2,657
Royal Life Saving Awards	...	...	916

The functions of the Schools Swimming Association, which is divided into five districts, have proved most successful."

XI.—PROVISION OF MEALS.

During the year, 175,510 free dinners have been granted as compared with 126,866 in 1931. In addition, between 1st May and 31st December, 12,968 free milk meals were given.

Milk in Schools.

The scheme for the supply of milk on a voluntary basis in infants' schools has proved equally popular this year as last. At present about 8,000 children are receiving milk daily.

The provision of free milk to necessitous children has been extended, by permission of the Board of Education, to include six other schools in the poorest parts of the City. The supply to these children is granted on the recommendation of the School Medical Officer.

XII.—SCHOOL BATHS.

Bathing facilities are provided in the following schools :—

- (1) Redcross Street School for Physically Defective and Feeble-minded Children.
- (2) Orchard Place School for Feeble-minded Children.
- (3) Knowle Open Air School.
- (4) Baptist Street Elementary School.
- (5) St. Werburgh's Nursery School.

XIII.—CO-OPERATION OF PARENTS.

Some days before a routine medical inspection in school, written notification is sent to the parents requesting their attendance at the examination, and during the year the number present at routine inspections was 12,693. The following is an analysis of these attendances :—

Code Groups.	No. of Children Examined.	No of Parents present.	Percentage
Entrants ...	5,696	5,262	92·4
Intermediates	5,161	4,046	78·4
Leavers ...	5,402	3,385	62·7
	16,259	12,693	78·1

At the clinics, when any special examination is required (*e.g.* for eye, ear and orthopaedic cases) the parent almost invariably accompanies the child.

The increasing interest amongst the parents in regard to matters of hygiene is maintained, and on the whole they co-operate readily with the School Medical Department in any efforts to improve the health of the children.

XIV.—CO-OPERATION OF TEACHERS.

It is always a pleasure to express our thanks to the Bristol teachers for the invaluable help given to ensure the smooth working of this Department. We feel now, however, the need to emphasize our appreciation, since in addition to the routine arrangements previously reported, we have received their ungrudging assistance in the schemes for the immunisation of children against diphtheria and the supply of milk in infants' schools.

XV.—CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

A close relationship exists between the School Medical and School Attendance Departments. The Superintendent Attendance Officer and his staff provide reports on a large number of children, and assist greatly in securing the attendance of absentees for examination at clinics. By their visits to homes, they obtain information in regard to environment and other factors which may affect the health of children, and this is often of great assistance to us in dealing with difficult cases. A number of parents who refuse to obtain treatment for their children are visited and action is taken in cases of neglect and cruelty.

The Attendance Officers also help by collecting the small weekly instalments by which the majority of parents prefer to pay for spectacles and surgical appliances supplied to their children. This means a great deal of home visiting and a considerable amount of clerical work.

XVI.—CO-OPERATION OF VOLUNTARY BODIES.

The Winford Orthopaedic Hospital incorporating the Bristol Crippled Children's Society, assisted in dealing with a large number of crippled cases during the year :—80 were sent to this hospital for prolonged periods, 9 to other hospitals at the seaside or in the country, 43 to convalescent homes, and 7 to farms ; while 370 cases were assisted in the provision of surgical appliances. In

regard to the latter, the Education Committee make up any deficit that may arise in the case of children attending the Redcross Street Cripple School, and of elementary school children for whom the Committee's Orthopaedic Surgeon has ordered apparatus.

In connection with this hospital, the After-Care Committee, of which Dr. Dalby, Miss Elkins and Mr. Gregory are members, meets at regular intervals to consider means of assisting patients after their discharge from Winford.

In the past the Royal Surgical Aid Society contributed one-fifth of the cost of spectacles provided for elementary school children, but the grant was discontinued as from 30th June, 1932. We take this opportunity of expressing our gratitude for the very material help the Society has rendered for so many years.

Cases where definite cruelty is discovered are reported to the National Society for the Prevention of Cruelty to Children, and the parents cautioned, or prosecuted by their Inspectors. The good work done by this Society is very much appreciated by the department.

XVII.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

The methods of ascertainment and classification of these cases have been described in previous reports. At the present time only two of the Medical Officers in the department are recognised by the Board of Education for the purpose of Section 55, Education Act, 1921, and Section 31, Mental Deficiency Act, 1913, but it is expected that one other officer will be recognised in 1933 on completing a course in mental deficiency at the University of London.

(a) Feeble-minded Children.

The Committee maintains two schools for feeble-minded children :—Redcross Street School which accommodates 199, and Orchard Place School which accommodates 88. The total number in the two schools at the end of the year was 253.

The figures are set out below :—

	<i>Redcross Street.</i>	<i>Orchard Place.</i>	<i>Total.</i>
No. admitted during 1932 ...	32	7	39
No. discharged ...	36	6	42
No. on register at end of year...	186	67	253

In addition the Committee maintains six boys at Besford Court, one boy at Bigod Hall and one girl at Allerton Priory.

The number of retarded children referred by Head Teachers and investigated during the year was 133. In addition, 20 children attending Special Schools were examined at the request of their parents, who made application for them to leave school before attaining the age of sixteen.

A systematic re-examination of the children attending these schools was carried out during the year.

(b) Physically Defective Children.

At Redcross Street School, the recognised accommodation for physically defective children is 140. The cases admitted include disease of bones, joints, and general nervous system, with, in addition, a number of "cardiac cripples" having congenital or rheumatic heart disease.

The children are conveyed to and from Redcross Street School in special ambulances, and the majority of the scholars have their mid-day meal in school.

Mr. Chitty, the Orthopaedic Surgeon, visits the school twice weekly to examine children and to advise as to treatment, which is carried out in the Orthopaedic Clinic attached to the School.

In addition to cases reported by the School Medical Department, a considerable number of children under school age are referred to this clinic by the Maternity and Child Welfare Department. In this way, children with crippling defects are treated during the earliest stages of the disease.

The Nurse in attendance carries out a large amount of massage and electrical treatment, and also all the necessary work in connection with the treatment of eye, ear, skin and minor ailments for both departments of the school. The total number of attendances made for treatment last year was 17,628, of which 7,775 were for orthopaedic treatment, and 9,853 for the other ailments mentioned.

Surgical boots and appliances are obtained for the children through the School Medical Officer, and a large number of repairs to apparatus are made every year through the same agency.

During the year the following admissions and discharges were made :—

No. of admissions	...	...	...	...	41
No. of discharges	...	...	...	...	47
No. on register at end of year	...	...	...	...	133*

* Including one boy from another authority.

The following table shows the different ailments from which the children are suffering :—

	<i>Boys.</i>	<i>Girls.</i>	<i>Total.</i>
Paralysis : (a) Flaccid	33	20	53
(b) Spastic	6	7	13
Tuberculosis : Bones and Joints	9	4	13
Congenital abnormalities of bones and joints	3	4	7
Amputations	1	—	1
Spinal curvature (non-tubercular)	2	6	8
Rickets	1	3	4
Heart Disease and Chorea	3	6	9
Epilepsy	3	1	4
Talipes	6	5	11
General Debility, etc.	4	6	10
	—	—	—
	71	62	133
	—	—	—

Two children are maintained at residential schools as follows : one girl at St. Rose's R.C. School, Stroud, one girl at St. Vincent's Orthopaedic Hospital, Eastcote.

(c) Deaf Mute Children.

The Residential School for Deaf Children has accommodation for 55 children—45 boarders and 10 day pupils.

No. of admissions during 1932	...	nil.
No. of discharges	...	8 (6 boys, 2 girls).
No. on register at end of 1932	...	41 (25 boarders, 16 day pupils).

Sixteen of the boarders are maintained by outside Education Authorities. All the children admitted are totally deaf ; partially deaf children attend the day school at Moorfields.

(d) Myopic Children and Partially Deaf Children.

The Moorfields Special School has accommodation for 130 children, of whom 100 have progressive short-sight or seriously damaged vision, and 30 very defective hearing.

In the Myope Department, the children have defects of the eye or vision which make teaching by ordinary methods undesirable. At the same time, they are not cases which require attendance at a Blind School, and are not likely to take up occupations generally selected by the blind. The whole curriculum is therefore designed to prevent eye strain, the teaching is mainly oral, and every effort is made to train the children to avoid overuse of the eyes. All cases are under careful and regular supervision by the ophthalmic consultant.

No. admitted during 1932	...	...	...	...	9
No. discharged	...	...	...	...	16
No. on register at end of year	...	...	...	...	70

Of this total, 3 boys and 1 girl come from another Education Authority.

In the Partially Deaf Department, the children are too deaf to benefit from the instruction given at ordinary school. They still retain sufficient hearing, however, to keep them from degenerating into the deaf-mute condition, and every effort is made to retain the speaking voice by means of speech exercises and lip-reading.

No. admitted during 1932	...	...	...	...	9
No. discharged	...	...	...	...	14
No. on register at end of year	...	...	...	...	26

Of this total, 2 boys and 1 girl come from other Authorities.

(e) Blind Children.

Twenty-two blind children are maintained by the Education Committee at the following school :—

Westbury Blind Asylum ... 22 (16 boys, 6 girls).

In addition one girl is maintained at Leamington Sunshine Home and one boy at the Roman Catholic Blind School, Liverpool.

XVIII.—NURSERY SCHOOL AND CLASSES.

No additional accommodation for pre-school children has been provided since the last report.

At the Castle Green Nursery Class a room has been equipped as a small clinic for the treatment of minor ailments. This became necessary owing to the impossibility of ensuring attendance at the ordinary school clinic.

The number of children on the registers at the end of 1932, was as follows :—

	No. on registers.	
St. Werburgh's Nursery School	...	113
Castle Green Nursery Class	...	72

The scheme of medical inspection in these schools is for every child to be given a routine examination at intervals of six months, unless the infant's condition necessitates it being seen more frequently. The number of inspections made during the year was 265 at St. Werburgh's and 77 at Castle Green.

Cases for action are shown in the Table below :—

	<i>St. Werburgh's.</i>				<i>Castle Green.</i>
Otitis media	...	...	...	4	2
Other ear disease	...	...	...	1	1
Enlarged tonsils	...	...	...	12	1
Adenoids	...	...	...	2	5
Tonsils and adenoids	...	...	...	5	4
Other nose and throat conditions	...	...	...	9	1
Teeth	...	...	...	30	21
Bronchitis	...	...	...	1	
Anaemia	...	...	...	1	
Rickets	...	...	...	4	
Spinal curvature	...	...	...	3	
Other deformities	...	...	...	5	
Other defects	...	...	...	2	

In addition 6 children were recommended courses of ultra violet ray treatment.

A considerable number of children not requiring immediate treatment is kept under constant observation.

As in 1931, Dr. M. G. Hughes, Chief Assistant, Maternity and Child Welfare Department, has been responsible for the medical inspection, whilst the Health Visitors for the respective districts attend daily to treat minor ailments, etc.

XIX.—SECONDARY SCHOOLS.

There are twelve non-Municipal and four Municipal Secondary Schools, with one Junior Technical School, in the city.

(1) Medical Inspection.

Medical inspection is only carried out in the Municipal Secondary Schools and the Junior Technical School. These schools with their accommodation and average attendance are :—

<i>Secondary—</i>	<i>Accommodation.</i>	<i>Average Attendance.</i>
Cotham (Boys)	600	551
Fairfield (Boys and Girls) ...	450	465
St. George (Boys and Girls) ...	450	468
Merrywood (Boys and Girls)...	260	252
	1,760	1,736
<i>Technical—</i>		
Temple Junior Technical ...	100	98

All children obtaining scholarships to Secondary Schools are required to pass a medical examination prior to admission, and the number so examined in 1932 was 282.

All the pupils of these schools, irrespective of whether they are free-place students or otherwise, are subjected to an annual medical inspection. In the case of girls, Dr. Monica A. O'Donohoe carries out the examination.

Parents are invited to attend but the response is not nearly so good as in the case of elementary schools.

The number of children examined in a routine way during 1932 was 1,858, including Junior Technical pupils.

The system of following-up defects is the same as that for elementary school children.

(2) Medical Treatment.

Any physical defects found are notified to the parents, who usually make arrangements with the family doctor for treatment,

except in the case of defects which require prolonged or specialized treatment. For instance, ailments of the eye, ear, nose and throat are usually attended to at one of the school clinics. Spectacles are as a rule provided through the School Medical Department, on the prescriptions of the Committee's Oculists.

Where remedial exercises are advisable for the rectifying of spinal curvature, flat-foot, etc., a report is sent to the Superintendent of Physical Instruction, under whose direction appropriate exercises are given in school. In a few cases the treatment is given at the Orthopaedic Clinic by one of the Remedial Gymnasts.

No differentiation is made between free-place or paying pupils who wish to avail themselves of treatment under the Authority's scheme. Whilst no charge is made for treatment at the school clinics, voluntary contributions are invited from those seeking dental treatment.

XX.—EMPLOYMENT OF CHILDREN.

The following report has been sent by Mr. C. K. Rossiter, Inspector under the Employment of Children Act, 1903, and the Education Act, 1921 :

“ The number of cases investigated and completed during the year was 1,571, which were dealt with as follows :—

Warned	...	...	...	...	...	1,476
Prosecuted	...	...	...	...	...	41
Street-trading licences revoked or refused	...					7
Employment cards revoked or refused	...	...				41
Theatre Licence refused	...	...	...	...		2
Permits for Dancing Displays refused	...	...				4
						1,571

Eighty-three licensed children have taken part in public entertainments during the year, and 94 visits have been paid to the dressing-rooms, surroundings, apartments and schools, for the purpose of seeing that the conditions and restrictions were observed.

Permission was granted for 2,503 children to take part in dancing displays given for charitable purposes. In each case the halls and dressing-rooms where the children changed were visited in order to ascertain that the general conditions regarding heating, lighting, etc., were satisfactory.

The total number of young persons (between ages 15 and 16) licensed to trade in the streets during the year was 9.

Up to the end of December, 1932, 563 children have been registered under the by-laws to deliver newspapers, milk, run errands, etc., or to do indoor domestic work.

The total number of children for the year who were employed before school hours between 7 and 8 a.m. was 317, and the number employed on Sundays between 8 and 10 a.m. was 160.

All children under this Act are examined by one of the Assistant School Medical Officers before the licence is issued.

XXI.—MENTAL DEFICIENCY.

Fifty-five cases were notified under the Mental Deficiency Act to the Local Control Committee during the year, and were classified as follows :—

	Boys.	Girls.	Total.
(1). (i) Children incapable of receiving benefit or further benefit from instruction in a Special School :			
(a) Idiots	1	2	3
(b) Imbeciles	17	1	18
(ii) Children unable to be instructed in a Special School without detriment to the interests of other children :			
(a) Moral defectives	—	—	—
(b) Others	4	2	6
(2). Feeble-minded children notified on leaving a Special School on or before attaining the age of 16	13	14	27
(3). Feeble-minded children notified under Article 3, i.e., "special circumstances" cases	—	—	—
(4). Children who in addition to being mentally defective were blind or deaf	—	1	1
Grand Total	35	20	55

XXII.—MISCELLANEOUS.

The following special medical examinations were made during the year :—

Candidates for Junior Scholarships in Secondary Schools ...	282
" " Central Schools	289
Student Teachers	32
Children examined under Employment of Children Act ...	516
	1,119

TABLE I. (SECONDARY).

NUMBER OF CHILDREN INSPECTED 1ST JANUARY, 1932, TO
31ST DECEMBER, 1932.

A.—ROUTINE MEDICAL INSPECTION.

Age	10	11	12	13	14	15	16	17	18	19	20	Grand Total
Boys	—	186	355	226	224	164	124	52	11	1	—	1,343
Girls	1	68	95	92	91	107	46	12	3	—	—	515
Totals	1	254	450	318	315	271	170	64	14	1	—	1,858

B.—SPECIAL INSPECTIONS.

Re-examinations (*i.e.*, No. of children re-examined) 118

TABLE II. SUMMARY OF TREATMENT OF DEFECTS.

Defect or Disease.	Number of Children Treated.		
	Under Local Education Authority's Scheme.	Otherwise.	Total.
Skin	2	—	2
Visual Defects	124	10	134
Nose and Throat	1	7	8
Eye Disease	—	1	1
Deformities	24	—	24
Miscellaneous	3	4	7
Total	154	22	176

TABLE III. (SECONDARY).

RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL INSPECTION IN 1932.

Defect or Disease.	Routine Inspections.	
	Number referred for treatment.	Number requiring to be kept under observation, but not requiring treatment.
1	2	3
Malnutrition	4	2
Skin and Hair	2	1
Teeth	225	9
Nose and Throat	39	16
Glands	—	—
External Eye Disease	1	2
Vision	124	2
Colour Sense	—	1
Ear Disease	4	1
Hearing	1	—
Speech	—	—
Thorax	—	—
Heart and Circulation	4	12
Anaemia	2	3
Lungs	—	7
Nervous System—Headache	—	1
Overstrain	—	—
Indigestion	—	1
Constipation	—	—
Spinal Curvature	15	2
Flat Foot	9	5
Other Defect	11	8
Catamenia	1	—

Number of Children		Percentage of Children found to require Treatment.
Inspected.	Found to require Treatment.	
1,858	*173	9.3

* Excluding Uncleanliness and Dental Disease.

ELEMENTARY SCHOOLS.

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

A. ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections								
Entrants	..	..	..	..	..	..	..	5,696
Intermediates	..	..	..	..	..	..	..	5,161
Leavers	..	..	..	..	..	..	..	5,402
Total	..	..		..	..	..	..	16,259
Number of other Routine Inspections								
	..	..	..	..	..	..	..	57

B. OTHER INSPECTIONS.

Number of Special Inspections	..	..	..	..	..	..	..	24,489
Number of Re-inspections	..	..	..	..	..	..	..	25,718
Total	..	..	..	..	..	..	..	50,207

TABLE IIb.

B. NUMBER OF *individual children* FOUND AT *Routine* MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group. (1)	Number of Children.		Percentage of Children found to require treatment. (4)
	Inspected. (2)	Found to require treatment. (3)	
CODE GROUPS :—			
Entrants	5,696	795	13.95
Intermediates	5,161	830	16.08
Leavers	5,402	763	14.13
Total (code groups)	16,259	* 2,388	14.68
Other routine inspections	57	12	21.05

TABLE IIA.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER 1932.

Defect or Disease.					Routine Inspections.		Special Inspections.	
					No. of Defects.		No. of Defects.	
					Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment	Requiring treatment	Requiring to be kept under observation, but <i>not</i> requiring treatment
(1)					(2)	(3)	(4)	(5)
	Malnutrition	35	165	39	—			
	Uncleanliness	—	—	—	—			
	(See Table IV. Group V.)							
Skin.	Ringworm :—							
	Scalp	—	—	88	—			
	Body	2	—	152	—			
	Scabies	2	—	112	—			
	Impetigo	9	3	2,736	—			
	Other Diseases (non-Tuberculous) ..	15	13	1,012	24			
Eye	Blepharitis	21	5	378	3			
	Conjunctivitis	3	2	349	3			
	Keratitis	—	—	7	1			
	Corneal Opacities	—	1	36	1			
	Defective Vision (excluding Squint)	869	88	855	248			
	Squint	49	23	81	21			
	Other conditions	1	4	405	15			
Ear	Defective Hearing	37	8	117	5			
	Otitis Media	27	18	707	5			
	Other Ear Diseases	3	1	357	12			
Nose and Throat	Enlarged Tonsils only	412	403	105	89			
	Adenoids only	92	54	43	14			
	Enlarged Tonsils and Adenoids ..	332	127	443	23			
	Other Conditions	42	6	970	88			
Enlarged Cervical Glands (Non-Tuberculous) ..					20	100	348	241
Defective Speech					2	15	5	—
Teeth—Dental Diseases					—	—	—	—
(See Table IV., Group IV.)								
Heart and Circulation	Heart Disease :—							
	Organic	121	102	49	21			
	Functional	9	130	27	12			
	Anaemia	27	72	87	19			
Lungs	Bronchitis	202	267	573	372			
	Other Non-Tuberculous Diseases ..	3	8	116	3			
Tuber- culosis	Pulmonary :—							
	Definite	10	5	6	—			
	Suspected	31	13	61	21			
	Non-pulmonary :—							
	Glands	8	10	7	2			
	Spine	—	—	2	—			
	Hip	—	—	—	—			
	Other Bones and Joints	—	—	1	—			
	Skin	—	—	—	—			
	Other Forms	3	2	9	—			
Nervous System	Epilepsy	6	8	9	5			
	Chorea	11	19	83	10			
	Other Conditions	5	19	82	16			
Deformities	Rickets	3	2	6	—			
	Spinal Curvature	19	19	—	—			
	Other Forms	29	35	39	—			
Other Defects and Diseases					111	104	5,331	562

TABLE III.—RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys	Girls	Total
Children suffering from the following types of Multiple Defect, <i>i.e.</i> , any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling, or Heart Disease			21	17	38
Blind (including partially blind)	(i) Suitable for training in a School for the totally blind.	At Certified Schools for the Blind	17	7	24
		At Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution	—	1	1
	(ii) Suitable for training in a School for the partially blind	At Certified Schools for the Blind or Partially Blind ..	29	37	66
		At Public Elementary Schools	2	1	3
		At other Institutions	—	—	—
		At no School or Institution	—	—	—
Deaf (including deaf and dumb, and partially deaf)	(i) Suitable for training in a School for the totally deaf or deaf and dumb.	At Certified Schools for the Deaf	13	12	25
		At Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution	—	—	—
	(ii) Suitable for training in a School for the partially deaf.	At Certified Schools for the Deaf or Partially Deaf ..	7	16	23
		At Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution	—	—	—
Mentally Defective	Feeble-minded (cases not notifiable to the Local Control Authority)	At Certified Schools for Mentally Defective Children	159	98	257
		At Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution	3	6	9
	Notified to the Local Mental Deficiency Authority <i>during the year.</i>	Details are given on page 41.	35	20	55
Epileptics	Suffering from severe epilepsy.	At Certified Schools for Epileptics	—	—	—
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	—	—	—
		At Public Elementary Schools	—	—	—
	Suffering from epilepsy which is not severe.	At other Institutions	—	—	—
		At no School or Institution	6	5	11
		At Public Elementary Schools	63	47	110
		At no School or Institution	1	1	2
Physically Defective	Active pulmonary tuberculosis (including pleura and intrathoracic glands)	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	1	2	3
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	—	—	—
		At Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution	12	14	26
	Quiescent or arrested pulmonary tuberculosis (including pleura and intrathoracic glands).	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	8	5	13
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	12	13	25
		At Public Elementary Schools	73	78	151
		At other Institutions	—	—	—
		At no School or Institution	35	17	52
	Tuberculosis of the peripheral glands.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	1	4	5
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	4	1	5
		At Public Elementary Schools	6	4	10
		At other Institutions	—	—	—
		At no School or Institution	6	3	9
	Abdominal tuberculosis	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	4	5	9
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	2	—	2
		At Public Elementary Schools	16	13	29
		At other Institutions	—	—	—
		At no School or Institution	9	5	14

TABLE III.—*Continued.*

		Boys	Girls	Total	
Physically Defective (continued)	Tuberculosis of bones and joints (not including deformities due to old tuberculosis).	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	26	18	44
	At Public Elementary Schools	2	—	2	
	At other Institutions	—	—	—	
	At no School or Institution	8	6	14	
	Tuberculosis of other organs (skin, etc.)	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	1	—	1
	At Public Elementary Schools	—	1	1	
	At other Institutions	—	—	—	
	At no School or Institution	—	—	—	
	Delicate children, <i>i.e.</i> , all children (except those included in other groups) whose general health renders it desirable that they should be specially selected for admission to an Open Air School.	At Certified Residential Cripple Schools	—	—	—
	At Certified Day Cripple Schools	—	—	—	
	At Certified Residential Open Air Schools	10	8	18	
	At Certified Day Open Air Schools	89	63	152	
	At Public Elementary Schools	131	93	224	
	At other Institutions	—	—	—	
	At no School or Institution	23	12	35	
	Crippled children (other than those with active tuberculous disease) who are suffering from a degree of crippling sufficiently severe to interfere materially with a child's normal mode of life.	At Certified Hospital Schools	18	13	31
	At Certified Residential Cripple Schools	—	1	1	
	At Certified Day Cripple Schools	66	56	122	
	At Certified Residential Open Air Schools	—	—	—	
	At Certified Day Open Air Schools	3	2	5	
	At Public Elementary Schools	16	9	25(4)*	
	At other Institutions	—	—	—	
	At no School or Institution	2	3	5(5)*	
	Children with heart disease, <i>i.e.</i> , children whose defect is so severe as to necessitate the provision of educational facilities other than those of the public elementary school.	At Certified Hospital Schools	6	6	12
	At Certified Residential Cripple Schools	—	1	1	
	At Certified Day Cripple Schools	3	6	9	
	At Certified Residential Open Air Schools	—	—	—	
At Certified Day Open Air Schools	7	9	16		
At Public Elementary Schools	—	—	—		
At other Institutions	2	—	2(1)*		
At no School or Institution	8	9	17		

* The figures in brackets refer to children who should be receiving Special School instruction

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE YEAR ENDED
31ST DECEMBER, 1932.

TREATMENT TABLE

Group I.—Minor Ailments excluding Uncleanliness, for which see Group V.

Disease or Defect. (1)	Number of Defects treated, or under treatment during the year.		
	Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
<i>Skin—</i>			
Ringworm Scalp	86	2	88
Ringworm Body	153	1	154
Scabies	114	—	114
Impetigo	2,744	1	2,745
Other Skin Disease	1,023	4	1,027
<i>Minor Eye Defects—</i> (External and other, but excluding cases falling in Group II).	1,196	4	1,200
<i>Minor Ear Defects</i>	1,074	20	1,094
<i>Miscellaneous</i> (e.g. minor injuries, bruises, sores, chilblains, etc.)	5,212	230	5,442
Total	11,602	262	11,864

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I).

Defect or Disease. (1)	Number of defects dealt with			
	Under the Authority's Scheme. (2)	Submitted to refraction by private practitioner or at hospital, apart from the Authority's Scheme. (3)	Otherwise. (4)	Total. (5)
Errors of Refraction (including Squint)	2,970	22	26	3,018
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	15	—	—	15
Total	2,985	22	26	3,033

Total number of children for whom spectacles were prescribed :—

(a) Under the Authority's Scheme	1,935
(b) Otherwise	48

Total number of children who obtained or received spectacles :—

(a) Under the Authority's Scheme	1,278
(b) Otherwise	705

Group III.—Treatment of Defects of Nose and Throat.

Number of Defects.				
Received Operative Treatment				
Under the Authority's Scheme, in Clinic or Hospital. (1)	By Private Practitioner or Hospital apart from the Authority's Scheme. (2)	Total (3)	Received other forms of Treatment. (4)	Total number treated. (5)
—	475	475	487	962

Group IV.—Dental Defects.

(1) Number of Children who were :—

(a) Inspected by the Dentist:

		Aged :								
Routine Age Groups	Age	{	5	..	219					
			6	..	4,900					
			7	..	4,073					
			8	..	4,280					
			9	..	4,411					
			10	..	4,208					
			11	..	3,983					
			12	..	3,967					
			13	..	2,593					
			14	..	776					
					Total	..	..	..	33,410	
Specials	..	..	..	..	..	..	..	..	1,079	
Grand Total									..	34,489

(b) Found to require treatment 28,402

(c) Actually treated 11,142

* (2) Half-days devoted to { Inspection 277
 { Treatment 1,679 Total 1,956

(3) Attendances made by children for treatment 21,737

(4) Fillings { Permanent teeth 6,042
 { Temporary teeth 254 Total 6,296

(5) Extractions { Permanent teeth, 4,301
 { Temporary teeth 22,206 Total 26,507

(6) Administrations of general anaesthetics for extractions 5,786

(7) Other operations { Permanent teeth 592
 { Temporary teeth 213 Total 805

* In addition to this number, the Dentists devoted 202 sessions to the treatment of mothers and young children under the joint scheme of the Education Committee and the Maternity and Child Welfare Committee.

Group V.—Uncleanliness and verminous conditions.

(i) Average number of visits per School made during the year by the School Nurses .. 8

(ii) Total number of examinations of children in the Schools by School Nurses .. 115,831

(iii) Number of individual children found unclean 4,180

(iv) Number of children cleansed under arrangements made by the Local Education Authority —

(v) Number of cases in which legal proceedings were taken :—

(a) Under the Education Act, 1921 —

(b) Under School Attendance By-laws 5

1932.

CITY AND COUNTY OF BRISTOL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

CONSTITUTION OF COMMITTEES.

The Lord Mayor :
T. J. WISE, Esq., J.P.

Health Committee.

Chairman :
Alderman H. J. Maggs, J.P.

Vice-Chairman :
Alderman J. E. Jones, J.P.

Alderman J. J. Milton, J.P.
Councillor E. W. Andrews
„ L. H. Bateman
„ W. H. Byrt, J.P.
„ E. T. Cozens, J.P.
„ H. S. Evans.
„ C. G. T. Bennett
„ Miss L. Meade-King
„ J. Owen
„ Mrs. E. S. Robinson-White, J.P.
„ H. Stallard
„ Sir L. A. Goodenough Taylor
„ H. A. White
„ W. T. Wright

Housing Committee.

Chairman :
Alderman J. E. Jones, J.P.

Vice-Chairman :
Alderman F. Sheppard, J.P.

Alderman F. F. Clothier, J.P.
Councillor C. S. Baston
„ F. E. C. Habgood
„ A. G. Heard
„ H. R. Lee
„ G. A. Martin
„ A. L. H. Smith
„ H. A. Wall
„ H. A. White
„ T. Thornton Wills

Mental Deficiency Act Committee.

Chairman :
Alderman F. Sheppard, J.P.

Vice-Chairman :
Miss F. M. Townsend, J.P.

Alderman F. F. Clothier, J.P.
Councillor W. H. Byrt, J.P.
„ R. C. Davies
„ A. F. Moon, J.P.
„ Mrs. E. A. Webb, J.P.
„ F. A. Webber
„ W. T. Wright
Mr. F. W. Phillips
Mrs. R. Burgess

The Town Clerk : Josiah Green, Esq.

CONSTITUTION OF COMMITTEES

(continued).

The full *Health Committee* is also the :—

Health (Accounts and Contracts) Committee
Maternity and Child Welfare Committee

Sub-Committees of the Housing Committee are :

Finance and General Purposes.
Tenancy and Staff
Painting

In addition Joint Committees for co-ordinating the health and medical services of the Council have been appointed by the following Committees :—

Health and Public Assistance
Health and Education

Other Sub-Committees of the Health Committee are :—

Port Sanitary
Farms and Gardens
Public Health Institutions
Nursing Homes
Assessment
Establishment of Fish Frying Business
Staff
Central Maternity Clinic
Public Abattoir
Accommodation for Infectious Disease, Somerset C.C.
Pathological
Public Health Schemes

PUBLIC HEALTH OFFICERS.

(Note :—Further details concerning staffs of various sections will be found at the commencement of the particular section).

(a) Medical.

Medical officer of health (city and port) and school medical officer	}	R. H. Parry, M.B., B.S. (Lond.), D.P.H.
Deputy medical officer of health		A. G. Morison, M.A., M.D., D.P.H.

Assistant Medical Officers of Health.

Tuberculosis officer	C. J. Campbell Faill, F.R.C.P., Ed.
Assistant tuberculosis officer	J. Scott Currie, M.B., Ch.B.

Maternity and child welfare-Chief assistant	M. G. Hughes, M.B., Ch.B.
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Assistant medical officers, centres	{	G. Hartley, M.D., M.M. A. A. Craig, M.B., B.S., D.P.H. and four part-time assistants.
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School medical service—

Chief assistant	...	...	A. A. Dalby, <i>M.C.</i> , <i>M.R.C.S.</i> , <i>L.R.C.P.</i>
			A. F. Alford, <i>M.B.</i> , <i>Ch.B.</i>
			M. A. O'Donohoe, <i>M.B.</i> , <i>Ch. B.</i> , <i>B.A.O.</i>
Assistant medical officers	...		C. P. Hay, <i>M.B.</i> , <i>Ch.B.</i> , <i>M.R.C.P. (Ed.)</i> , D.P.H.
			G. C. Kelly, <i>B.Sc.</i> , <i>M.D.</i> , <i>D.P.H.</i>
			A. R. Forbes, <i>M.B.</i> , <i>Ch.B.</i> , <i>D.P.H.</i> and two part-time assistants.

Ham Green Hospital and Sanatorium.

Medical superintendent ...	B. A. I. Peters, B.A., M.D., D.P.H.
Assistant medical officers—3	

Southmead Hospital.

Medical superintendent ...	P. Phillips, M.Sc., M.D.
Assistant medical officers—3	

Frenchay Park Sanatorium.

Medical superintendent ...	K. H. Pridie, M.B., B.S., F.R.C.S., Eng.
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Hortham Colony.

Medical superintendent ...	W. Wyatt, M.B., Ch.B., D.P.M., L.D.S., R.C.S.
----------------------------	---

Stapleton Institution.

Medical superintendent ...	S. Datta, M.D.
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Eastville Institution.

Medical superintendent ...	J. A. L. Roberts, M.B., B.S.
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In addition, there are the consulting staffs available for departmental service at the various hospitals.

Certifying officers, Mental Deficiency Acts ...	3
District medical officers under Poor Law Acts	8
Public vaccinators	8

PUBLIC HEALTH OFFICERS

(continued).

(b) Others.

Dental surgeons	...	...	5	(four school medical and one joint health and schools).
Principal sister, external nursing services	...	...	...	} Miss L. Elkins
Public analyst	...	...	...	
Veterinary surgeon (part-time)				G. E. Henson, M.R.C.V.S.

Sanitary inspectors.

Chief	...	...	...	J. A. Robinson, F.S.I.A.
Superintendent sanitary inspector	...			T. J. Cleal
Meat	...	...	...	3
Food, drugs and dairies	...	...	...	4
District	...	...	...	16

Housing inspectors.

Chief	...	A. W. Griffiths, Cert. Building, etc., R.S.I.	
Inspectors	...	...	3
Assistant inspector	...	...	1

Maternity and child welfare.

Superintendent health visitor	...	...	1
Deputy inspector of midwives and inspector of nursing homes	...	...	1
Health visitors	...	...	24
Welfare worker, affiliation orders, etc.	...		1*
Secretary, Boarding out Committees	...		1

* (Joint health and public assistance).

Tuberculosis.

Dispensary nurses	...	...	3
-------------------	-----	-----	---

Infectious diseases.

Home nurses	...	...	3
-------------	-----	-----	---

Clerical staff.

Chief clerk	...	...	C. W. M. Vincent
Second clerk	...	...	J. G. Watson
Clerks	...	...	31

School medical service (under Education Committee).

School nurses	...	...	18
Orthopaedic nurses	...	...	3
Dental attendants	...	...	5
(4 school and 1 joint health and schools).			
Clerks	...	...	11
Vaccination officers	...	...	2
(1 part-time)			
Supervising officer, Mental Deficiency Acts	...	...	1

CONTENTS.

	PAGE
Constitution of Committees	iii
Public health staff	v
Introduction	1
i SOCIAL CONDITIONS	9-14
Area and population	9
Census, 1931	9
Meteorology	12
ii VITAL STATISTICS	15-24
iii GENERAL PROVISION OF HEALTH SERVICES	25-33
Local Government Act, 1929	25
Mental deficiency	25
Laboratory facilities	29
Hospitals	31
Training of nurses	31
Health education	32
Ambulance facilities	32
iv MATERNITY AND CHILD WELFARE	34-49
Infant mortality	35
Maternal mortality	37
Midwives	38
Puerperal fever and puerperal pyrexia	40
Ophthalmia neonatorum	41
Notification of Births Act 1915	42
Assistance at confinement	43
Sunlight treatment	44
Milk grants	45
Dental treatment	45
Health visiting—training course for health visitors	46
Orthopaedic treatment	46
Children Act, 1908	47
Unmarried mothers	48
Nursing Homes Registration Act, 1927	49
v SANITARY CIRCUMSTANCES	50-60
Water	50
Drainage—closet accommodation—refuse disposal	50
Sanitary inspection statistics, etc.	53
Animal or insect pests	59
vi HOUSING	61-65
Inspection statistics	64
vii INSPECTION AND SUPERVISION OF FOOD	66-76
Milk supply	67
Meat and other foods	70
Food and Drugs Acts	74

CONTENTS

(continued).

	PAGE
viii PREVALENCE AND CONTROL OVER INFECTIOUS AND OTHER DISEASES	77-111
Notifications of infectious disease	77
Diphtheria—Immunisation	82
Dysentery—Stapleton Institution	87
Non-notifiable infections	89
Tuberculosis	94
Tuberculosis dispensaries	99
Venereal diseases	104
Prevention of blindness	107
Dental report—city hospitals	109
ix REPORTS OF MEDICAL SUPERINTENDENTS OF CITY HOSPITALS, SANATORIA, ETC.	113-129
Ham Green Hospital and Sanatorium and Novers Hill Hospital	113
Frenchay Park Sanatorium and Orthopaedic Hospital	117
Paper on "The use of the ventral position in the treatment of tuberculous disease in the spine in children" by K. H. Pridie, M.B., B.S., F.R.C.S. Eng.... ..	118
Southmead General Hospital	121
Stapleton Institution	126
Eastville Institution	127
APPENDIX	130-140
Tables relating to Vital Statistics	130
Water analyses	138
Meteorological observations	139
Hospital costings	140

CITY AND COUNTY OF BRISTOL.

ANNUAL REPORT, 1932.

My Lord Mayor, Ladies and Gentlemen—

I have the honour to submit my annual report on the health and sanitary circumstances of the city for the year 1932.

By the following observations, I desire to draw special attention to certain matters, further details concerning which are found in the body of the report.

Vital Statistics.

(pp. 15-24).

(a) CENSUS.

Details concerning statistics of the census taken in 1931 are to be found on pages 9 to 11. During the decennium the population of the city increased by 20,000 approximately and the number of private families by 13,000 approximately.

It is of the utmost importance, and of great interest, to note the relation between the population and the figures recorded for dwellings. If the figures are examined, it will be found that there is very little improvement in the matter of a dwelling for each family, for one out of every four dwellings in the city is occupied by two families. During the decennium the number of private families increased by 13,000, whereas the number of occupied dwellings only increased by 11,000, so that there were 2,000 more families than were accounted for by the increase in the occupied dwellings. Even if this figure is compared with the increase in the number of families of one person (approximately 1,300 for the decennium), the increase in the occupied dwellings has failed to keep pace with the increase in the number of private families of two or more persons.

It will be noticed that the average size of occupied dwellings, i.e., the number of rooms, is smaller in 1931, as compared with 1921, and that the average family occupation (number of rooms) is slightly larger.

There is also a tendency for the average family per occupied dwelling to get smaller, and a distinctly smaller number of people per room as compared with 1921.

A striking feature is a diminution in the size of the private family (i.e. the number of persons). From 1921 to 1931 the average size has diminished by approximately 9 per cent.

It is to be noted that 2.89 per cent. of the private families in the city of Bristol (3,017 in number) representing 5.29 per cent. of the population (i.e., 20,050) are still living more or less in overcrowded conditions, as measured by the density of more than two persons

per room. These figures, however, do show an improvement on the 1921 census when 1.6 per cent. more of the population were living under such conditions.

(b) POPULATION. (p. 9).

The estimated population in mid-1932 (403,900) shows an increase of 4,000 over the figures supplied for mid-1931.

(c) BIRTHS. (p. 17).

The birth rate is again the lowest on record, being 15.01 per thousand.

(d) DEATHS. (p. 19).

The death rate was 11.49 per thousand population—0.35 per thousand lower than that for 1931.

The death rate from cancer has again increased, and the figures confirm my contention in last year's report that this increase is genuine and not apparent.

General provision for health services. (pp. 25–33).

Dr. Allan C. Parsons of the Ministry of Health visited the city for the purpose of a general survey of the health services, and the report thereon has been forwarded to the Council. On the whole, the report is satisfactory, but special attention is drawn to certain gaps in the service, which must sooner or later be remedied. The committees concerned have these matters under their serious consideration.

LABORATORY FACILITIES. (pp. 29, 30).

Special attention is directed to the laboratory scheme provided by an agreement between the Corporation and the University. This scheme will take a very prominent part in the work of the city council for the prevention of disease. Facilities will be available for the early diagnosis of disease by the general practitioner and the municipal hospitals: by these means early treatment can be given with resulting improvement in the prospect of recovery.

MATERNITY AND CHILD WELFARE. (pp. 34–49).

The infant mortality rate (51.4 per thousand) for 1932 although slightly higher than that for the year 1931 still remains one of the lowest for the larger cities in the country. The maternal mortality rate is also low (2.53 per thousand births), and shows a fall of 0.5 per thousand births upon 1931.

The value of the service is becoming appreciated more and more by parents, and greater numbers are seeking the assistance of and guidance from the department. Naturally this means that the cost of the service will increase, but it also means that valuable results will be found amongst a greater number of mothers and children.

Housing.

(pp. 61-65).

Steady progress has been made towards ridding the city of its slums. However, it must be realised that the housing problem of Bristol is not confined to the problem of slum clearance, but includes the provision of adequate supplies of houses for the inhabitants. In this connection the figures for the 1931 census should be specially consulted.

Inspection and supervision of food.

(pp. 66-76).

Public opinion is gradually becoming more apparent in regard to the question of clean milk. The demand for bottled milk has increased by 10 per cent. since 1931, and the quantities of certified and grade A. T.T. milk consumed has increased by 18 per cent. Special attention has been directed during the year to the detection of *tubercle bacilli* in raw milk, and the number of samples tested (303) is more than double that of 1931.

Several examinations were also made for the presence of *bacillus abortus* : this is in connection with the special research work undertaken by Professor Walker Hall and published in my report of last year.

MEAT. (pp. 70-73).

The problem of the private slaughterhouse and the public abattoir was prominent before the council during 1932. The council has decided to proceed with the erection of a public abattoir and to obtain the consent of the Ministry of Health thereto. A scheme has been prepared, and awaits the approval of the Ministry.

Prevalence and control over infectious and other diseases.

(pp. 77-111).

The outstanding features of the year in regard to this branch of the work are the following :—

(1) A notable fall in the incidence of diphtheria, there being only 533 cases compared with 828 in 1931 and 1,484 in 1930. Immunisation against this disease has been in progress, but the response of parents to appeals made to them to protect their children against the disease has been most disappointing. Less than 3,500 received the full course and 640 for various reasons failed to attend to be schick-tested. Too much stress cannot be laid upon the importance of testing the child after he has had a full course to see whether or not immunity has resulted, and the special attention of all practitioners has been drawn to this particular point. The mere receiving of a full course does not necessarily mean that the child becomes immunised. Indeed, less than 40 per cent. were immunised as a result of a full course. Neglect to schick-test after a full course has been given is likely to bring all immunisation work into disrepute.

It is noted that cases of diphtheria have occurred amongst immunised children. Seven such cases occurred during the year. The figures show that an artificially immunised child is four times less likely to catch the disease than the rest of the children (in arriving at this figure all the child population in the city of 1-14

years were considered, of whom no doubt a large number had become naturally immunised).

TUBERCULOSIS.

In my report to the Health Committee dated 9th December, 1931, I drew attention to the fact that compared with five other towns—Birmingham, Sheffield, Leeds, Bradford and Cardiff, where the death rate from tuberculosis had fallen in various proportions from 10 to 30 per cent.—the death rate from the disease in Bristol had hardly fallen at all in the years 1921-30. The following comparisons for the last three years from the same towns are interesting :—

	Death rate per 1,000 population.		
	1930	1931	1932
Birmingham ...	1.026	1.058	0.94
Sheffield ...	0.857	0.818	0.817
Leeds ...	1.114	1.083	1.02
Bradford ...	0.886	0.934	0.93
Cardiff ...	1.147	1.309	1.26
BRISTOL ...	1.158	1.03	0.83

During the last three years, Bristol shows by far the greatest fall in the death rate from the disease. If the fall is maintained, Bristol may well show for this disease the lowest death rate of all large towns in the country.

The Council, and the Health, Education and Housing Committees in particular may well feel proud of the result of their increased concentration upon the promotion of the health of, and the prevention of disease amongst, the inhabitants of the city. This is undoubtedly the branch of medicine which ultimately will show the greatest return for the expenditure : no local authority at any time can afford to neglect its importance.

In this connection it is to be noted—and here lies a great need for improvement—that

- (1) the number of persons suffering from tuberculosis, information concerning whom comes to the notice of the department for the first time on their death certificate, is still high, and amounted to 73 cases in 1932.
- (2) A large number of patients come to the notice of the department in a hopelessly advanced stage of the disease, where no form of treatment holds out any hope of improvement.

The medical superintendent of Ham Green sanatorium draws special attention to this (page 115), and further states that in 70 per cent. of such cases the delay is caused by the patients not seeking or refusing advice until too late. In 30 per cent. the true cause of the condition apparently has not been discovered by the medical attendant.

The tuberculosis officer (p. 100) draws attention to the valuable work done by the voluntary After-Care Committee. We sincerely hope that their new venture at Southmead will be a success.

VENEREAL DISEASE. (pp. 104-107).

For the second year in succession the number of new cases of venereal disease has diminished. It is hoped that this indicates a lower incidence and that a more enlightened public is guarding itself against infection.

PREVENTION OF BLINDNESS. (p.p. 107-109).

An interesting report upon the work of the Blind Persons Clinic is given by Dr. Garden, the certifying ophthalmic surgeon.

DENTAL TREATMENT. (pp. 109-111).

I draw special attention to a most important summary of his work by Mr. Hanbury Hazell, L.D.S., the Committee's dental officer. He refers to the association of a low calcium content in the tooth structure in acute pulmonary tuberculosis cases at Ham Green in spite of a sufficiency of *vitamin D*. in the diet.

City Hospitals. (pp. 112-129).

(a) HAM GREEN HOSPITAL. (Infectious disease).

A very satisfactory report upon the work of this institution is submitted from Dr. Peters. He draws attention to:

- (1) The increasing severity of scarlet fever. He informs me (June 1933) that since writing his report he has had admitted a case of haemorrhagic scarlet fever which he has not met for several years.
- (2) The value of his treatment in the prevention of complications of scarlet fever and in the treatment of diphtheria.
- (3) The fact that diphtheria is a very severe type, although because of the improved method of treatment the fatality rate was only 3.8 per cent. and ten were moribund on admission.
- (4) The immense value of immunisation against diphtheria and scarlet fever for the prevention of the illnesses amongst the staff.

(b) FRENCHAY PARK SANATORIUM AND ORTHOPAEDIC HOSPITAL.

The result of treatment of cases at this institution during 1932 has indeed been remarkable. The hospital seems to be eminently suitable for the treatment of children. The supply of fresh food obtained direct from the farm as well as the enthusiasm of the medical staff have contributed in no small measure to the success of treatment. An interesting and important original contribution upon the treatment of tuberculosis of the spine in children, by the medical superintendent, is included on pages 118 to 120.

(c) SOUTHMEAD HOSPITAL.

This hospital has, during 1932, taken a prominent part in the treatment of the sick of Bristol. It is the largest general hospital in the city, there being more than 550 beds, as compared with 426 beds in the next largest, the Bristol Royal Infirmary.

In the development of this institution, the Health Committee has had in mind the important question of the large number of Bristol people waiting for admission for treatment to the various voluntary hospitals in the city. This problem is a serious one from the point of view of the local authority, for many cases, through waiting for admission, can so deteriorate that they are no longer amenable to treatment.

It is incorrect to consider that the only way of solving the "waiting list" problem is by the addition of more beds. Much can be done, and in Bristol needs to be done, in the matter of co-ordination between the various voluntary institutions and between these as a whole and the municipal institutions.

The local authority here has its own problems in regard to Southmead. With the same number of beds, a greater turnover of cases result from increased efficiency in administration and treatment. This method will give much assistance in the reduction of "waiting lists" and although it involves additional cost for those same beds, yet it means an enormous saving in capital and overhead expenditure.

The Health Committee have decided to increase the efficiency of Southmead Hospital so as to assist the voluntary hospitals in their excellent work in the treatment of the sick. With this end in view, the following steps have been taken by the committee in order to improve the efficiency of the hospital :

- (1) As far as possible, other accommodation is provided for patients who are not likely to derive benefit from a further stay at hospital. In this way, with the co-operation of the Public Assistance Committee, 50 beds became available at Eastville Institution, and chronic cases were transferred from Southmead for their occupation.

For destitute mothers occupying maternity beds when they no longer require hospital treatment, arrangements have been arrived at with the Bristol Diocesan Refuge for their care. The valuable work done by the welfare officer in this connection is also to be noted.

- (2) The efficiency of the clinical work of the staff does and must depend upon the facilities in the way of laboratory assistance, and equipment which are available. In this connection great steps forward have been taken by the Health Committee during 1932, and amongst these may be mentioned :

- (a) The improvement in the accommodation in the maternity department, whereby cases can be classified clinically, so as to diminish the risk to other patients. Nurseries for the children have been provided, and steam

sterilising equipment has been supplied to the labour wards. Dr. R. S. S. Statham, professor of obstetrics at the University, has been appointed consultant to the section.

- (b) The number of maternity cases treated in the institution increased to 538 during 1932. The committee has considered seriously the advisability of encouraging more confinements in the home where conditions are suitable. In relation to Southmead, a "district" has been established under the supervision of a specially trained maternity sister. It is hoped that the Central Midwives Board will recognise this provision for the district training of the midwives at the hospital.
- (c) Steam sterilisers have been introduced into the operating theatre. This was an urgent necessity. This unit, however, still remains unsatisfactory, for the anaesthetic room is too small, and there is no satisfactory surgeons' room, plaster room, or other annexes. Furthermore, a second operating theatre is urgently necessary so that clean and septic theatres may be available.

Mr. Wilfred Adams, M.S., F.R.C.S. (Eng.) has been appointed surgeon to the hospital in place of Mr. Kyle, retired.

PUBLIC ASSISTANCE INSTITUTIONS.

Interesting summaries of the work done at the Stapleton and Eastville institutions by their medical officers are appended.

The following contributions to medical literature have been made by members of the staff :—

Professor I. WALKER HALL.

"Brucella Abortus in market milks."
(Annual Report, 1931).

Dr. P. PHILLIPS.

"Pregnancy and Parkinsonism."
(Presented to University of Bristol, June, 1932).

The late Dr. CAREY F. COOMBS.

"Discussion on some problems concerning the prevention and treatment of acute rheumatic infection" (Proceedings of the Royal Society of Medicine, September, 1932).

Dr. B. A. I. PETERS.

"The prevention of renal complications following scarlet fever."
(*The Practitioner*, November, 1932).

Dr. A. G. MORISON.

“Speech and Intelligence.”
(*Lancet*, April, 1932).

“The pathogenesis of mental deficiency.”
(*Lancet*, September, 1932).

Evidence before departmental committee of the Board of
Control on sterilization (December, 1932).

Dr. K. H. PRIDIE.

“The use of the ventral position in the treatment of tuberculous disease of the spine in children.”
(Annual Report, 1932).

In conclusion, I tender my best thanks to the various committees for which I have had the pleasure of working during the past year, for their courtesy and helpful interest in the work of the department. My best thanks are specially due to the chairman of the Health Committee who has devoted a considerable amount of his time to assist in the work ; to the Town Clerk and other principal officers of the Corporation for their valuable assistance and cordial co-operation. Finally, I would also record my appreciation and thanks to all the members of the staff for their zeal and enthusiasm in their work.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

R. H. PARRY,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
BRISTOL.

July, 1933.

1.—SOCIAL CONDITIONS.

The present *area of the city*, exclusive of tidal waters or foreshore, is 19,674 acres, but the boundaries will be further extended on the 1st April, 1933, by the addition of 2,884 acres on the south side of the city, enclosing the municipal airport at Whitchurch (353 acres), part of Bishopsworth (886 acres) and Brislington (1,645 acres). The water jurisdiction extends over the Avon to Hanham Mills and over the Bristol Channel from the Holms to Aust Cliffs up the Severn estuary, a tidal water area of 1,528 acres.

Bristol is well supplied with *parks and open spaces* which contribute materially to the health and enjoyment of the community. The situation of these areas, representing some 1,189 acres altogether (or one acre for every 339 inhabitants) was described last year with details of the facilities for games provided. Interested readers are also referred to the same report for the geological formations of Bristol and the meteorological data of our local climate.

The *population of the city*, as estimated by the Registrar-General at mid-1932, is 403,900, an increase of 4,000 over the figure supplied for mid-1931. Within a radius of 50 miles there is a population of over 2½ millions.

Census results, 1931.

The volume containing the statistics of the census taken on 26/27th April, 1931, for the county of Gloucester, was published in April, 1933. The populations there enumerated include the county borough of Bristol, which continues to be the most populous area, with 397,012 population, ranking as the seventh largest city in the country, and containing over 60,000 population more than the administrative county of Gloucester.

During the decennium the population of the city has increased from 377,018, a numerical increase of 19,994 persons (representing an increase of 5.3 per cent.)

The comparative figures for the registration sub-districts are as follows :—

1921	Sub-Registration district.	1931	Increase	Decrease
	ASHLEY.			
17,717	District	16,740	—	977
19,571	Horfield (a)	27,973	8,402	—
12,217	Redland	14,030	1,813	—
	BRISTOL SOUTH.			
20,639	*Bedminster East	19,704	—	935
23,670	*" West	26,884	3,214	—
21,682	*Somerset (a)	29,283	7,601	—
19,697	Southville	17,006	—	2,691
	BRISTOL CENTRAL.			
3,779	Central, East	2,876	—	903
1,248	" West	999	—	249
7,606	Redcliffe	6,670	—	936
10,075	St. James	9,655	—	420
17,133	St. Paul	15,492	—	1,641
	CLIFTON.			
8,930	Clifton North	7,869	—	1,061
9,300	" South	9,246	—	54
16,721	St. Augustine's	14,909	—	1,812
11,669	St. Michael	11,249	—	420
	ST. GEORGE.			
22,679	Easton	20,610	—	2,069
24,305	St. George East	26,566	2,261	—
22,906	" West	20,596	—	2,310
19,576	St. Philip & Jacob South	17,014	—	2,562
	STAPLETON.			
22,053	St. Philip & Jacob North	20,026	—	2,027
28,051	Stapleton (a)	35,013	6,962	—
	WESTBURY-ON-TRYM.			
15,794	*Westbury-on-Trym (a)	26,602	10,808	—
377,018		397,012		

It is necessary to explain that in the districts marked (*) the changes may be in a measure accounted for by alterations effected in the areas of the sub-districts between 1921 and 1931, while the large increase of population in the wards marked (a) is attributed mainly to residential development.

I append a summary of the figures relating to Bristol, with those for 1921 where possible. In comparing the present position with that in 1921 some allowance may have to be made for differences in the circumstances attending the respective censuses. For instance, the 1921 census was taken on 19/20 June when the staffs and scholars of resident schools, colleges, etc., were in residence. In 1931 they were on vacation. Also, there may have been some temporary holiday absence in 1921, which would introduce a further element of non-comparability in the enumerated figures.

	1931	1921	Variation
POPULATION	397,012	377,018	+19,994
Males	185,125	173,803	+11,322
Females	211,887	203,215	+ 8,672
HOUSING OF PRIVATE FAMILIES—			
Structurally separate dwellings occupied by—			
1 private family	1931 67,179	1921 56,919	+10,260
2 private families	13,521	13,287	+ 234
3 or more private families ...	2,884	2,264	+ 620
Wholly vacant structurally separate dwellings	1,343	1,630	(—) 287
Average size of occupied dwellings (rooms)	5.61	5.63	(—) .02
Average family occupation (rooms)	4.49	4.48	+ .01
Families per occupied dwelling ...	1.25	1.26	(—) .01
Average size of private family (persons)	3.63	3.97	(—) .34
Average persons per room	0.81	0.89	(—) .08
Average persons per acre	20.2	20.5	(—) .3

POPULATION CLASSIFIED BY HABITATION, 1931.

In dwellings occupied by private families	95.3 per cent.
In hotels, lodging houses, etc.	1.7 „
In schools, orphanages, etc.	0.5 „
In hospitals, nursing homes, etc.	0.9 „
In institutions for mentally deficient, crippled, blind, etc.	0.7 „
In poor law institutions	0.3 „
In prisons, police stations, etc.	0.1 „
In military premises, ships, etc.	0.1 „
In civilian ships	0.2 „
All others including vagrants	0.2 „

The estimated numbers of *inhabited houses* on 31st March, 1933, according to the rate book was 90,924, void houses 1,532, total 92,456.

The *rateable value* on the 1st April, 1932, was £2,694,128 (exclusive of government property, £21,299), and the sum represented by a penny rate during 1932 approximately £10,833. The rates levied for the year were 12/6 in the £ as in the two previous years. Of this sum, expenditure on public health services represent 2/6.3d., made up as follows:—

ADMINISTERED BY HEALTH COMMITTEE	... 1/2.1d.
Hospitals, sanatoria, etc. :	
(a) for tuberculosis	4.4d.
(b) „ venereal disease	.6d.
(c) „ infectious disease	2.5d.
(d) „ general hospitals	1.0d.
Maternity and child welfare	2.3d.
Port sanitary service	.2d.
Other health services	3.1d.
ADMINISTERED BY SANITARY COMMITTEE	... 1/4.2d.
Sewers and sewage disposal	2.4d.
Collection, disposal, etc., of refuse	7.8d.
Baths, wash-houses, etc.	1.7d.
Parks and open spaces	3.0d.
Public conveniences	1.3d.

Bristol is amongst the lowest rated of all the ports and industrial centres of the United Kingdom.

Unemployment.

The manager of the employment exchange has kindly furnished me with statistics of the highest recorded numbers of wholly unemployed persons (excluding "casual" and "short-time" workers) in each quarter during 1932.

During		Men	Women	Boys	Girls
1st quarter	{ 1931	13,781	4,078	679	681
	{ 1932	17,082	2,796	905	789
2nd quarter	{ 1931	13,352	3,894	652	676
	{ 1932	17,495	2,231	817	598
3rd quarter	{ 1931	12,864	3,619	547	452
	{ 1932	17,066	2,183	1,050	813
4th quarter	{ 1931	14,577	4,482	684	587
	{ 1932	17,671	2,302	1,042	599

The foregoing figures relate to the areas covered by Bristol, Westbury-on-Trym, Bristol docks, Avonmouth, Eastville and Kingswood local offices.

While unemployment has been severe and shown little signs of diminishing during the year the variety of our local industries (over 300 distinct industries) protects us from suffering such deep trade depression as those towns where there is practically only one industry.

There are over 21,000 people engaged in the distributive trades, 5,000 in the harbour, dock and river services, 8,000 in general engineering, a similar number in tobacco, 5,000 in cocoa and chocolate, and nearly 10,000 people in cardboard box, paper bags, stationery and printing.

Poor relief.

Outdoor relief administered in the city was as follows :—

1932		Cases relieved.	Persons relieved.	Cost.
On 25th June ...	...	4,902	13,669	£2,593
On 24th December ...	...	4,757	12,324	£3,098

The total cost of outdoor relief for the year ending 31st March, 1933, was £163,678, against £126,566 last year.

The Weather of 1932.

I am indebted to Mr. H. H. Harding, F.R.Met. Soc., for the following meteorological report for 1932. The records are taken by Mr. Harding at Frampton Cotterell, and at St. Andrew's Park, Bishopston, by his associate, Mr. H. Vicars Webb. The results for the individual months appear in the table printed on page 139.

Observations at Bristol.

Mean pressure at 9 a.m., G.M.T. (corrected)...	29.992 inches.	
Departure from average (21 years) ...	+0.028 "	
Greatest pressure at 9 a.m. ...	30.964 "	on Jan. 26th.
Least pressure at 9 a.m. ...	29.103 "	" Oct. 9th.
Total rainfall at <i>Bishopston</i> (St. Andrew's Pk.)	37.87 "	
Departure from average ...	+2.78 "	
Number of rainy days ...	194.	
Heaviest rainfall in 24 hours ...	1.60 "	" May 1st.
Total rainfall at <i>Frampton Cotterell</i> ...	35.30 "	
Departure from average (25 years) ...	+3.71 "	
Number of rainy days ...	197.	
Departure from average (25 years)...	+13.	
Days with 0.04 in. or more ...	134.	
Days with less than 0.04 in. ...	63.	
Heaviest fall in 24 hours ...	1.69 "	" May 20th.
Mean humidity at 9 a.m. ...	85.6%	
Mean temperature (max. & min.) ...	49.6 degrees.	
Departure from average ...	0.0 degree.	
Maximum temperature in shade ...	93.6 degrees	on Aug. 19th.
Minimum temperature ...	19.0 "	on March 13th.
Extreme range ...	74.6 "	
Mean temperature warmest day ...	76.6 "	" Aug. 19th.
Mean temperature coldest day ...	29.3 "	" Feb. 10th.
Hours of bright sunshine ...	1,401½.	
Days of bright sunshine ...	109.	
Days entirely overcast ...	83.	
Days upon which thunder observed ...	10.	
Days " " fog " ...	44.	
Days " " snow " ...	5.	
Number of frosty nights ...	53.	
Number of " on grass ...	104.	

Following the fair weather which was a feature of the last few weeks of the old year, a great change occurred with the advent of 1932, a period of wild stormy conditions setting in. These culminated about midnight following the 16th in a fierce squall of rain and hail. A complete change then took place and for the remainder of the month fair quiet weather prevailed with much fog however at times. At first very high temperatures accompanied this change, the maximum recorded on the 19th being with one exception, a record for the month in this locality, but subsequently the weather became much colder and from the 21st onwards the temperature was generally deficient.

With little exception similar conditions lasted throughout the following month and onward until the last week in March—this period giving, from January 17th to March 7th inclusive, a partial drought of 51 days' duration. Temperature during this time kept well below the normal and, although no severe cold was experienced, frosty nights were frequent and indeed were almost continuous for the first half of March.

The first day of spring however brought an entire change and a wet unsettled period set in which continued with little intermission throughout the spring season, both April and May being most inclement; the latter month proving easily the wettest and most unseasonable May of the present century. Only once indeed since Dr. Burders record commenced in 1853 has more rain fallen in this month in the Bristol district, this being in 1869 when his measurement at Clifton was 6.30 inches. Later in the century 5.56 ins. was recorded in 1878, but these two instances stand alone as giving amounts of 5 ins. or over for May in our neighbourhood.

It is interesting to note that in each of these years the summers were upon the whole fine and warm and once again history repeated itself for with June a period of fine dry weather set in which lasted until its closing days; these, however, bringing heavy and welcome rainfalls.

July proved somewhat disappointing for while its temperature was normal its rains were frequent although not as a rule heavy. A very noticeable feature was the large amount of cloud prevailing, for although there were several days when sunshine was plentiful, in no case did one pass without more or less cloud developing.

Heavy rains marked Bank Holiday—the opening day of August—but subsequently a general improvement set in and the month became one of the driest and warmest months of recent years. On the 11th a maximum temperature of 85 degrees was recorded, the highest locally since the 29th of the month in 1930, this being followed by a short period of cooler weather to the 14th. Then temperature again rose and the 19th proved the hottest day experienced locally this century and for a good many years before. However, apart from this instance the temperature only exceeded 80 degrees upon five occasions, so that the heat cannot be compared to that of 1911 when a maxima of 90 degrees was recorded at this station in July, August and September, apart from numerous instances of 80 degrees and upwards. What indeed was far more exceptional was the night time warmth of the month, there being seven minima of 60 degrees and over, while on no occasion did one of less than 50 degrees occur.

Unfortunately with August the fine weather ended, September opening with heavy downpours, and apart from a short period from the 14th to the 18th, rain fell almost daily to the end. Similar conditions obtained throughout the following month, although here credit must be given for many sunny days, the rainfall showing a marked preference for the nighttime or early morning hours.

With November drier conditions again became dominant and both this and the succeeding month showed deficiencies of rainfall of between one and two inches. A feature of November peculiar to our district was that while in other parts of our islands sunshine was very deficient—more so in some places than ever before recorded—here the hours of bright sunshine were more than those reported from other stations.

Taking the year as a whole while its inclement springtime did much to mar a season which earlier had showed great promise, the fine warm summer which followed brought compensations which if not adequate, at least produced results from an agricultural standpoint which was much better than were even hoped for at the close of May. Further the dry quiet weather of the closing months was of great value inasmuch that it enabled much preparatory work for the coming season to be done under the best possible conditions.

Ultra-violet radiation.

The monthly average readings of ultra-violet radiation in 1932 reported for Bristol to the Sunlight League by Mr. G. H. Brown, Bristol Meteorological Observatory, were as follows:—

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Av.
1931	0.7	0.9	1.3	3.0	3.6	6.0	4.6	2.4	1.9	2.6	0.8	0.3	28.1	2.34
1932	1.0	1.0	1.8	1.0	1.7	5.5	3.5	5.3	2.1	1.4	0.6	0.7	24.6	2.05

II.—VITAL STATISTICS.

Summary for 1932.

1931	EXTRACTS FOR THE YEAR.				1932
19,615	Area (in land acres)				19,674
399,900	*Population (mid-year estimate)...				403,900
£10,600	Penny rate yield				£10,833
15.10	BIRTH RATE per 1,000 population				15.01
11.84	DEATH RATE „ „ „ „				11.49
3.26	Natural increase „ „ „ „				3.52
	INFANT MORTALITY per 1,000 livebirths—				
49.6	Legitimate				51.0
86.3	Illegitimate				64.5
50.8	Total				51.4
26.7	Neo-natal mortality per 1,000 livebirths ...				26.05
39.9	Stillbirth rate per 1,000 total births ...				37.9
3.02	Maternal mortality per 1,000 total births ...				2.53
1.59	Puerperal sepsis				.63
1.43	Other puerperal causes				1.90
3.02	Total „ „ „ „				2.53
0.30	ZYMOTIC DEATH RATE per 1,000 population ...				0.23
6,040	*LIVEBIRTHS :				6,065
2,985	Legitimate males				2,983
2,858	„ females				2,865
5,843	Total				5,848
104	Illegitimate males				111
93	„ females				106
197	Total				217
251	*STILLBIRTHS—				239
148	Legitimate males				139
90	„ females				90
238	Total				229
9	Illegitimate males				5
4	„ females				5
13	Total				10
4,732	DEATHS—				4,642
37.62	Percentage of deaths occurring in public institutions				38.98
8	Maternal deaths from sepsis				4
11	„ „ „ other causes				12
64	Deaths from measles (all ages)				2
5	„ „ whooping cough (all ages) ...				31
18	„ „ diarrhoea (under 2 years of age)				34
358	„ „ pulmonary tuberculosis... ..				294
120	„ „ influenza				154
31	„ „ diphtheria				22
2	„ „ scarlet fever				3

* Figures supplied by Registrar General.

Note (1). Unless otherwise stated all figures relating to vital statistics in this report are compiled from local returns.

(2). The vital statistics furnished by the Registrar General for Bristol for 1932 together with annual summaries back to 1918 and quinquennium figures from 1881/1885 to 1926/1930 are printed in the appendix to this report (pages 130 to 136) together with comparative rates for England and Wales for births, deaths, infant and maternal mortalities.

Comparative Statistics, 1932.

	Population	Rate per 1,000 population.		Rate per 1,000 live births	Rate per 1,000 total births		
		Live Births	Deaths	Deaths under one year	Maternal deaths		Still- births
					All causes	Puerper- al sepsis	
England & Wales	40,201,000	15.3	12.0	65	4.06	1.54	43
118 County Boroughs ...	20,536,650	15.4	11.8	69	—	—	—
Birmingham ...	1,009,300	16.3	11.3	67	3.60	1.62	35.0
Liverpool ...	859,500	21.05	13.2	91	2.69	0.84	43.6
Manchester ...	763,000	15.37	13.03	85	3.47	1.45	45.33
Sheffield ...	513,000	14.41	11.64	73	4.27	2.07	42.23
Leeds ...	484,900	14.44	13.34	88	3.0	1.14	46
Bristol ...	403,900	15.01	11.49	51	2.53	.63	37.9
Bradford ...	296,300	13.56	13.89	75	5.22	2.13	46.7
West Ham ...	289,300	17.2	11.4	71	2.9	1.7	27.1
Nottingham ...	270,700	16.35	12.46	80	3.03	0.87	41
Portsmouth ...	253,100	16.2	12.2	60	2.3	0.9	41
Cardiff ...	222,600	15.6	12.5	76	5.26	1.11	56.6
Plymouth ...	208,440	15.59	12.55	58	5.87	2.35	44.9

Above are given comparative statistics for Bristol compared with eleven other large towns, the county boroughs, and with England and Wales. The features in regard to the figures for Bristol are as follows :

1. It has the lowest birth-rate with the exception of Leeds, Sheffield and Bradford, the birth-rate for Bristol being below the average for the whole country.
2. With the exception of West Ham and Birmingham it has the lowest death rate, and is again below the average for the whole country.
3. The infant mortality rate for Bristol is the lowest of those quoted, and is 14 per thousand below the average for the whole country.
4. The maternal mortality rate is the lowest but one, and the puerperal sepsis figure the lowest in the table. In each instance the figure is well below the average for the whole country.
5. The stillbirth rate for Bristol is amongst the lowest, and is five per thousand below that of the whole country.

Marriages.*Marriage rates, 1923-1932.*

		1932	1931	1930	1929	1928	1927	1926	1925	1924	1923
<i>Marriages</i> ...		3,098	3,287	3,320	3,197	3,059	3,071	2,845	3,012	2,924	2,997
Rate {	Bristol ...	15.3	16.4	16.8	16.3	15.7	15.9	14.8	15.6	15.1	15.5
	England and Wales ...	15.2	15.6	15.8	15.8	15.3	15.7	14.3	15.2	15.3	15.2

The marriage rate for 1932 shows a drop of 1.1 per thousand. The provisional marriage rate for England and Wales for the same period was 15.2 per thousand population, a drop of 0.4 below that for 1931.

Births.*

1931			1932					
Live	Still		Legitimate		Illegitimate		Total	
			Live	Still	Live	Still	Live	Still
3,089	157	Males ...	2,983	139	111	5	3,094	144
2,951	94	Females ...	2,865	90	106	5	2,971	95
6,040	251	TOTAL ...	5,848	229	217	10	6,065	239
15.10	0.63	Rate per 1,000 living ...	14.48	.57	0.53	.02	15.01	0.59
	39.9	Rate per 1,000 total births		36.33		1.58		37.91

* Registrar General's figures.

The provisional birth rate for England and Wales was 15.3 per 1,000 population, the lowest recorded nationally for the fourth year in succession, being 1.0 below that for 1929 and 1930, and 0.5 below that for 1931.

As regards Bristol's birth rate of 15.01 per 1,000 population, it is to be noted that

- the rate is a decrease of 0.09 on the rate for 1931.
- the rate is the lowest birth rate ever recorded in Bristol.
- If we compare this year's birth rate with the mean birth rate for the first five years of this century (27.2 per 1,000) we are confronted with a drop of 12.19 per 1,000. This means that 4,800 fewer babies were born in Bristol last year than would have been the case had the birth rate been the same as the mean for 1901/1905.
- The natural increase of the population, or in other words, the excess of births over deaths, was 3.52 compared with 3.26 in 1931, and an average of 4.6 for the previous ten years.

- (c) There were 217 illegitimate live births during the year, or 20 more than in the previous year. This figure equals 3.6 per cent. of the total births, as compared with 3.3 per cent. in 1931 and 4 per cent. in 1930.

Stillbirths.*

The stillbirth rate per 1,000 population was 0.59, a decrease of 0.04 compared with 1931, while the rate per 1,000 total births (including stillbirths) was 37.9 compared with 39.9 last year. The corresponding figures for England and Wales were 0.66 and 43. Of these stillbirths, 10 were illegitimate, which equals 4.2 per cent. of the total stillbirths.

Births notified.

The number of births notified under the Notification of Births Act, 1915, is included in the report on the maternity and child welfare section (see page 42).

Total births registered by sex and legitimacy and in registration sub-districts.

Total 1931		Total 1932	Live births.		Still births	
			Males	Females	Males	Females
6,315	Legitimate ...	6,317	3,094	2,965	154	104
285	Illegitimate ...	269	120	137	5	7
557	Ashley ...	529	239	269	16	5
1,314	Bristol South	1,357	681	634	24	18
1,408	„ Central	1,515	724	695	55	41
810	Clifton ...	759	369	363	13	14
1,083	St. George ...	999	500	467	21	11
655	Stapleton ...	570	293	256	12	9
773	Westbury-on-Trym ...	857	408	418	18	13
	1932	6,586	3,214	3,102	159	111
	1931	6,600	3,260	3,075	165	100

The above figures are uncorrected.

* Net figures corrected for inward and outward transferable births, as supplied by the Registrar General, are given in the preceding tables.

Natural increase of population, 1923-1932.

(Registrar General's figures).

Rate per 1,000 population	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923
Births	15.0	15.1	15.7	15.6	16.3	16.3	17.4	17.4	18.0	19.1
Deaths	11.5	11.8	11.4	12.9	11.5	12.4	11.5	13.4	12.2	11.3
Natural Increase	3.5	3.3	4.3	2.6	4.8	3.9	5.9	4.0	5.8	7.8

Deaths.

The tables on pages 21 to 24 set out the principal causes of death in Bristol last year, classified according to the manual of the international list of causes of death, dated 1931. Prior to the adoption of this manual the abridged list comprised 32 causes. The list has now been extended to 36 causes by the inclusion of syphilis, general paralysis of the insane, aneurysm and other circulatory diseases, other diseases of liver, etc., other digestive diseases and senility—which were formerly generally grouped under “other defined causes”—and by dropping the specification of smallpox, rheumatic fever, and arterio sclerosis.

These tables give details of the number of deaths with death rates and percentage to total deaths for each of the principal causes, and the deaths by causes for each quarter, in age groups, and in registration sub-districts.

Observations on the statistics relating to infant mortality and maternal mortality will be found in the section of this report dealing with maternity and child welfare.

The total number of deaths registered during the year was 4,642, a decrease of 90 on the number recorded in 1931. The deaths comprised 2,326 males and 2,316 females. This net figure gives a death rate of 11.49 per 1,000 of the population as compared with 11.84 for the previous year and 11.9 for the five years 1926/31. Bristol's death rate has thus remained very uniform during the last few years.

The provisional death rate for England and Wales for 1932 is 12.0 per 1,000 (0.51 higher than Bristol) and 11.8 for the combined county boroughs.

Heart disease (with 22.8 per cent.) again heads the list, in order of numerical importance, as the principal cause of mortality followed by respiratory diseases excluding pulmonary tuberculosis (14.3 per cent.), cancer (13.2 per cent.) and pulmonary tuberculosis (6.3 per cent.) which together accounted for 56.6 per cent. of the total deaths.

Causes of death which show notable increases compared with the previous year, in the death rate per 1,000 population are heart disease (0.13), whooping cough (.07), cancer (.16). Influenza shows a rise of 34 deaths (or .08), mostly in the first quarter of the year when the disease is usually prevalent, but if one considers these deaths in relation to all forms of respiratory diseases (excluding pulmonary tuberculosis), a net increase of only 11 deaths is obtained.

The notable decreases in the death rate per 1,000 are again those recorded for tuberculosis and diphtheria. Deaths from pulmonary tuberculosis declined by 64 (or .17 per 1,000) and for other tuberculous diseases by 8 deaths (.02) while diphtheria deaths fell from 31 to 22 (.03) and measles from 64 to 2 (.15).

Death rate in quarters.

The death rate for the first quarter of the year was 15.09 per 1,000 ; for the second, 11.46 ; for the third, 9.12 ; and for the fourth,

10.45. These rates show the considerable variation which customarily takes place in the seasonal mortality. The first quarter is usually the heaviest and respiratory causes, especially influenza, account for the comparatively high death rate recorded. Whooping cough was responsible for 24 deaths in the first and second quarters.

Causes of death at ages.

The table on p. 23 gives the number of deaths according to age groups. The number of deaths of children aged 0-5 amounted to 415, or 8.9 per cent. of the total deaths; children of school age 5-15 totalled 84 (1.8 per cent.); 15-25, 177 (3.8 per cent.), 25-45, 473 (10.2 per cent.); 45-65, 1,197 (25.8 per cent.); 65 and upwards, 2,296 (49.5 per cent.) The average age of death of persons in the last age group was 75 years 7 months.

An examination of this age group table shows that for certain causes the majority of deaths occurred in certain age groups, for instance :—

Measles and whooping cough	100%	occurred under 5 years.
Diphtheria	91%	between 2 and 15 years.
Influenza	77%	over 45 years.
Cancer	91%	„ 45 „
Heart disease	94%	„ 45 „
„ „	72%	„ 65 „
Pneumonia	58%	„ 45 „
„	25%	under 5 „
Acute and chronic nephritis	86%	over 45 „

Accidents as a cause of mortality.

The number of accidents was higher again in 1932. The total number of deaths due to vehicular traffic and cycles was 40, giving a percentage of 3.8 approximately of the number of accidents that occurred.

The following table has been kindly supplied by the chief constable :—

1931		Horse-drawn vehicles	Mechanically propelled vehicles				Pedal cycles	Total accidents, 1932
			Omni-buses and motor coaches	Tramcars and trackless trolley vehicles	Other vehicles	Total		
42	ACCIDENTS Fatal ...	—	2	2	30	34	6	40
1,017	Non-fatal	12	22	19	682	735	328	1063

The number of inquests, including deaths certified by the coroner after post mortem without an inquest, held at Bristol during the year was 370, two less than 1931.

1932.

Principal causes of death.

1931	Disease.	Net deaths in 1932	% to total deaths.	Death rate per 1,000
1	1 Typhoid and paratyphoid fevers ...	2	.04	.004
64	2 Measles	2	.04	.004
2	3 Scarlet fever... ..	3	.06	.007
5	4 Whooping cough	31	.67	.08
31	5 Diphtheria	22	.47	.05
120	6 Influenza	154	3.32	.38
3	7 Encephalitis lethargica	11	.24	.03
15	8 Cerebro spinal fever	11	.24	.03
358	9 Tuberculosis of respiratory system	294	6.33	.73
48	10 Other tuberculous diseases ...	40	.86	.10
16	11 Syphilis	20	.43	.05
*	12 General paralysis insane, tabes dorsalis	23	.49	.06
584	13 Cancer, malignant disease	613	13.20	1.52
62	14 Diabetes	50	1.09	.12
268	15 Cerebral haemorrhage, etc. ...	253	5.45	.63
996	16 Heart disease	1,060	22.83	2.62
*	17 Aneurysm	17	.37	.04
*	18 Other circulatory diseases	33	.71	.08
182	— Arterio-sclerosis	167	3.59	.41
206	19 Bronchitis	185	3.98	.46
278	20 Pneumonia (all forms)	256	5.51	.63
50	21 Other respiratory diseases	70	1.51	.17
36	22 Peptic ulcer	40	.86	.10
43	23 Diarrhoea, etc.	55	1.19	.14
32	24 Appendicitis	32	.69	.08
6	25 Cirrhosis of liver	11	.24	.03
*	26 Other diseases of liver, etc. ...	11	.24	.03
*	27 Other digestive diseases	96	2.07	.24
201	28 Acute and chronic nephritis ...	202	4.35	.5
8	29 Puerperal sepsis	4	.09	.009
11	30 Other puerperal causes	12	.26	.03
155	31 Congenital debility, premature birth, malformations, etc.	168	3.62	.41
*	32 Senility	142	3.06	.35
59	33 Suicide	64	1.38	.16
137	34 Other violence	137	2.95	.34
724	35 Other defined causes	319	6.87	.79
24	— Rheumatic fever	28	.61	.07
7	36 Causes ill-defined or unknown ...	4	.09	.009
4,732		4,642	100.00	11.49

* Classified under 35 prior to 1932.

1932.

Causes of death in quarters.

Total 1931	Disease.	Quarters.				Total
		1st	2nd	3rd	4th	
1	1 Typhoid and paratyphoid fevers	1	—	—	1	2
64	2 Measles	1	1	—	—	2
2	3 Scarlet fever	1	—	—	2	3
5	4 Whooping cough	9	15	4	3	31
31	5 Diphtheria	6	3	6	7	22
120	6 Influenza	114	22	2	16	154
3	7 Encephalitis lethargica	7	—	2	2	11
15	8 Cerebro spinal fever	5	5	1	—	11
358	9 Tuberculosis of respiratory system	87	92	62	53	294
48	10 Other tuberculous diseases ...	11	12	8	9	40
16	11 Syphilis	6	6	3	5	20
*	12 General paralysis insane, tabes dorsalis	7	5	5	6	23
584	13 Cancer, malignant disease ...	146	175	135	157	613
62	14 Diabetes	18	9	14	9	50
268	15 Cerebral haemorrhage, etc. ...	73	65	47	68	253
996	16 Heart disease	336	262	212	250	1,060
*	17 Aneurysm	4	5	5	3	17
*	18 Other circulatory diseases ...	13	8	7	5	33
182	— Arterio-sclerosis	42	44	34	47	167
206	19 Bronchitis	104	28	23	30	185
278	20 Pneumonia (all forms)	116	48	32	60	256
50	21 Other respiratory diseases ...	33	15	6	16	70
36	22 Peptic ulcer	13	8	9	10	40
43	23 Diarrhoea, etc.	10	15	17	13	55
32	24 Appendicitis	5	14	6	7	32
6	25 Cirrhosis of liver	3	1	5	2	11
*	26 Other diseases of liver, etc. ...	4	3	—	4	11
*	27 Other digestive diseases	18	28	25	25	96
201	28 Acute and chronic nephritis ...	70	43	52	37	202
8	29 Puerperal sepsis	—	—	3	1	4
11	30 Other puerperal causes... ..	2	6	2	2	12
155	31 Congenital debility, premature birth, malformations, etc. ...	56	37	42	33	168
*	32 Senility	50	32	19	41	142
59	33 Suicide	15	17	17	15	64
137	34 Other violence	34	44	29	30	137
724	35 Other defined causes	90	74	77	78	319
24	— Rheumatic fever	8	10	5	5	28
7	36 Causes ill-defined or unknown	1	1	2	—	4
4,732	TOTAL ...	1,519	1,153	918	1,052	4,642
11.84	Death rate per 1,000	15.09	11.46	9.12	10.45	11.49

* Classified under 35 prior to 1932.

1932.

Causes of death at ages.

CAUSE OF DEATH.	Deaths in whole district at subjoined ages									Corrections made for transferable deaths.		Total deaths in Public Institutions.
	All ages	Under 1	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	Inward Transfers (+)	Outward Transfers (—)	
Certified	4641	311	45	58	84	177	473	1197	2296	94	436	1809
Uncertified	1	1	..	..	..	..	..	..	..	..	..	..
1 Typhoid and paratyphoid fevers ..	2	..	..	..	..	..	2	..	..	..	..	2
2 Measles	12	..	2	..	..	..	..	..	..	..	..	1
3 Scarlet fever	3	..	..	..	2	..	1	..	..	..	1	1
4 Whooping cough	31	15	8	8	..	..	..	..	..	..	..	8
5 Diphtheria	22	..	1	8	11	2	..	..	..	..	1	20
6 Influenza	154	4	2	2	2	7	19	38	80	3	6	41
7 Encephalitis lethargica	11	..	1	..	1	1	3	3	2	..	..	5
8 Cerebro spinal fever	11	2	..	..	4	2	2	..	1	..	1	11
9 Tuberculosis of respiratory system..	294	1	1	6	4	53	127	97	11	6	9	147
10 Other tuberculous diseases	40	7	5	1	2	9	6	4	1	1	6	26
11 Syphilis	20	6	1	..	..	1	2	7	2	..	2	18
12 General paralysis insane, tabes dorsalis	23	..	..	..	..	1	8	14	1	3	1	21
13 Cancer, malignant disease	613	..	..	..	2	1	53	274	283	4	78	242
14 Diabetes	50	..	..	..	1	3	..	15	31	1	6	20
15 Cerebral haemorrhage, etc.	253	..	..	..	..	..	3	73	177	1	15	89
16 Heart disease	1060	..	1	2	1	10	54	227	765	23	41	296
17 Aneurysm	17	..	..	..	..	..	1	11	5	..	..	9
18 Other circulatory diseases	200	..	..	..	..	..	5	37	158	3	10	36
19 Bronchitis	185	8	..	1	..	..	7	31	138	3	3	38
20 Pneumonia (all forms)	256	46	9	8	5	7	34	61	86	3	25	119
21 Other respiratory diseases	70	1	..	1	..	..	4	12	52	..	7	35
22 Peptic ulcer	40	..	..	1	..	..	9	15	15	..	7	19
23 Diarrhoea, etc.	55	29	5	1	..	1	3	4	12	..	4	32
24 Appendicitis	32	..	..	2	9	5	4	8	4	..	10	26
25 Cirrhosis of liver	11	..	..	..	..	1	..	5	5	..	2	2
26 Other diseases of liver, etc. ..	11	1	..	..	..	..	..	3	7	..	1	2
27 Other digestive diseases	96	4	2	..	4	5	10	36	35	2	18	65
28 Acute and chronic nephritis	202	1	..	2	..	5	21	73	100	4	14	74
29 Puerperal sepsis	4	..	..	..	..	1	3	..	..	..	5	4
30 Other puerperal causes	12	..	..	..	..	3	8	1	..	..	10	6
31 Congenital debility, premature birth, malformations, etc.	168	159	..	4	2	1	1	1	..	2	31	72
32 Senility	142	..	..	..	..	..	..	..	142	2	2	29
33 Suicide	64	..	..	..	..	6	15	32	11	6	9	12
34 Other violence	137	5	1	4	12	22	21	26	46	14	30	89
35 Other defined causes	347	23	6	7	22	31	47	89	122	12	81	191
36 Causes ill-defined or unknown ..	4	..	..	..	..	..	..	..	4	1	..	1
All Causes	4642	312	45	58	84	177	473	1197	2296	94	436	1809
Sub-entries included in above figures												
18a Arterio-sclerosis	167	..	..	..	..	..	3	33	131	3	5	29
35a Poliomyelitis	1	..	..	..	..	..	..	..	..	..	1	..
Erysipelas	10	5	1	..	..	1	..	..	3	..	1	7
Polo encephalitis	3	..	..	..	..	1	1	1	..	..	..	2
Venereal (other than disease (syphilis)	..	..	..	..	..	..	..	..	1	..	..	..
Dysentery	6	..	..	..	..	1	1	2	2	..	..	..
Rheumatic fever	28	..	..	..	10	8	5	3	2	3	1	12
Undulant fever	1	..	..	..	..	..	1	..	..	..	1	..

1932.

Causes of death in registration sub-districts.

CAUSE OF DEATH		DEATHS IN DISTRICTS AT ALL AGES.									
		All ages	Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Municipal Institutions (home unknown)	Port Cases
Certified		4,641	711	963	493	595	975	618	254	31	1
Uncertified		1	..	..	1	..	..	..	..	..	..
1 Typhoid and paratyphoid fevers ..		2	..	1	..	..	..	..	..	..	1
2 Measles		2	..	..	1	..	..	1	..	..	..
3 Scarlet fever		3	..	..	..	1	1	1	..	..	..
4 Whooping cough		31	..	9	7	4	7	2	2	..	..
5 Diphtheria		22	2	1	3	7	3	1	5	..	..
6 Influenza		154	24	30	15	25	30	22	8	..	..
7 Encephalitis letbargica		11	1	3	..	1	5	1	..	..	..
8 Cerebro spinal fever		11	2	..	1	..	4	3	1	..	..
9 Tuberculosis of respiratory system		294	34	75	29	27	59	49	17	4	..
10 Other tuberculous diseases		40	7	13	1	..	10	5	3	1	..
11 Syphilis		20	4	3	2	3	5	2	1	..	..
12 General paralysis insane, tabes dorsalis		23	3	9	2	3	1	2	1	2	..
13 Cancer, malignant disease		613	117	124	63	92	118	71	28	..	..
14 Diabetes		50	12	8	1	5	12	9	3	..	..
15 Cerebral haemorrhage, etc.		253	30	54	25	36	48	39	19	2	..
16 Heart disease		1,060	162	211	132	115	236	143	52	9	..
17 Aneurysm		17	3	3	3	1	4	2	1	..	..
18 Other circulatory diseases		200	37	42	22	36	36	19	6	2	..
19 Bronchitis		185	25	39	17	23	48	25	5	..	..
20 Pneumonia (all forms)		256	39	48	22	35	58	36	15	3	..
21 Other respiratory diseases		70	9	13	8	10	11	13	3	3	..
22 Peptic ulcer		40	9	7	4	2	13	2	3	..	..
23 Diarrhoea, etc.		55	11	7	7	6	13	9	2	..	..
24 Appendicitis		32	6	8	2	6	5	4	1	..	..
25 Cirrhosis of liver		11	3	1	3	..	4	..	..	..	..
26 Other diseases of liver, etc.		11	3	2	2	2	2	..	..	..	..
27 Other digestive diseases		96	18	26	7	18	13	10	4	..	..
28 Acute and chronic nephritis		202	31	47	19	21	45	25	14	..	..
29 Puerperal sepsis		4	..	2	..	..	2	..	..	..	..
30 Other puerperal causes		12	2	3	1	..	2	3	1	..	..
31 Congenital debility, premature birth, malformations, etc.		168	20	40	23	13	48	14	10	..	..
32 Senility		142	34	24	11	24	24	20	4	1	..
23 Suicide		64	7	15	7	10	10	8	6	1	..
34 Other violence		137	18	19	18	20	27	23	12	..	..
35 Other defined causes		347	38	74	34	48	69	54	27	3	1
36 Causes ill-defined or unknown ..		4	..	..	1	1	2	..	..	..	..
All causes		4,642	711	963	494	595	975	618	254	31	1
Sub-entries included in above figures	18a Arterio-sclerosis	167	30	34	21	30	31	15	4	2	..
	35a Poliomyelitis	..	..	..	..	..	..	..	..	..	..
	Erysipelas	10	..	3	2	2	3	..	..	..	..
	Polio encephalitis	3	..	..	..	1	1	..	1	..	..
	Venereal (other than disease (syphilis)	..	..	..	..	..	..	..	..	..	..
	Dysentery	6	..	1	1	..	3	..	..	1	..
	Rheumatic fever	28	2	9	2	..	11	3	1	..	..
Deaths of infants under 1			36	76	40	27	89	29	15	..	..

III.—GENERAL PROVISION OF HEALTH SERVICES.

Local Government Act, 1929.

My report for 1930 detailed the services transferred under the provisions of the Local Government Act and delegated to the Health Committee under the administrative scheme approved by the Council. There have been no amendments of the scheme as approved by the Ministry of Health since 1930.

During the year a general survey of the public health services of the city was made by the Ministry of Health. The following is an extract from the Ministry's report :—

“ It appears that so far as can be judged from a general survey the Council are maintaining a reasonable standard of efficiency and progress in the discharge of their functions relating to public health. The Minister is aware that considerable interest has always been taken by the Council in the development of their health services, and he notes with satisfaction in particular the successful measures which have been conceived and conducted for reducing the incidence of, and the fatalities and complications arising from, infectious diseases. The Minister notes also the progress which has been made in the separation of the various categories of medical services from the poor law since the scope of the Council's functions in regard to public health was extended by the transfer to them of the poor law medical services, and the close association of the medical officer of health with those medical services which are still carried on under the poor law.”

Poor Law Medical Out-relief.

There has been no change in regard to the policy of medical out-relief which is under the Public Assistance Committee since its transfer to the Council. The medical staff remains as described in 1930, under the general direction of the medical officer of health. Cases requiring hospital treatment are admitted to Southmead Hospital.

Institutional provision for the care of mental defectives.

Staff.

Certifying medical officers—

Dr. A. A. Dalby	}	under Education Act, 1921.
Dr. A. F. Alford		

Dr. D. Hall Beatson ... under Mental Deficiency Act, 1913.

Supervising officer ... W. E. Price.

Domiciliary visitors, 2 ; clerks, 1.

Medical superintendent, Hortham Colony ... Dr. W. Wyatt.

Full details of the work of the local authority in connection with the care of mental defectives were given in my report for 1930.

MENTAL DEFICIENCY ACT COMMITTEE.

Supervising officer's report for 1932.

During the year ended the 31st December, 1932, there has been very little that needs noting in the way of change of work of the Mental Deficiency Act in this city, though the committee have given their decisions to many matters of administration which I think will result in advantages all the way round and lead to administrative economy.

Among these matters is the decision of the committee to retain from the 1st April, 1933, the work previously allotted to the voluntary Association for Mental Welfare and also the removal of the executive offices of the Mental Deficiency Act Committee to 34 Prince Street.

The institution population on the 31st December of cases chargeable to Bristol was 467, being 225 males and 242 females. The majority of these cases are now maintained in Hortham Colony and Stapleton Institution, "outcounty" institutions providing for only 15 cases. An effort has been made to bring all cases into Bristol institutions and every case has been examined with this view. The institution population in this department of the health service has increased in 1932 by 18 as compared with the 1931 and by 123 as compared with the figure for 1928.

The total number of cases dealt with during the year is 121 of whom 44 were sent to institutions, six placed under "guardianship," and 71 remained in their own homes under supervision. In the "guardianship" cases the committee have thought it expedient to contribute a weekly sum towards the maintenance of each patient.

Forty-six cases have been allowed leave of absence from institutions on licence for a period of trial in less restricted circumstances than those prevailing in an institution and of these it has been necessary to return to the institution only five cases. Three cases have been transferred from institutions to "guardianship."

Of a mental defective population of 253 in special schools, I have scheduled for further consideration by the Mental Deficiency Act Committee 56 cases as compared with 57 last year. Of the 56 cases it has been found necessary to send 19 to institutions, 27 have been placed under supervision and action has been delayed in the remaining 10 cases for further consideration of the home circumstances and supervision available.

Of an institution population of about 460 cases there have been 13 deaths during the year.

The marriage of mental defectives under supervision is a great problem to the department. There are no statutory powers to assist in the prevention of the marriage of defectives and all that can be done is achieved by the influence of the officers. It can be realised that interference is a very difficult matter though success in some measure is being achieved. During the year there have been only six such marriages known to me and a careful and sympathetic supervision necessarily must be maintained in each case.

A pleasing position has been reached as regards the birth rate amongst mental defectives. There have been three children born in marriage and no illegitimate children. This is remarkable and is in itself a justification for statutory supervision.

In view of the impending transfer of the work of the voluntary association for mental welfare a scheme has been submitted to the committee for better organisation and administration of the of the occupation centres. These centres can be the source of much successful work and economy. As I have stated in previous report occupation centres are a vital factor in carrying out efficient statutory supervision. Further they can give great relief to the accommodation in our institutions. The time must come when they will be utilised much more than is the case at present.

Occupation centres.

Staff.

Supervisors, 9 (five part time); cook, 1; guide, 1.

Four occupation centres have been established for the employment under supervision of mental defectives who are returned to the care of their own people by night as follows :—

Centre	Trainees		Sessions.
	type.	no.	
Redfield Industrial	Adult females	30	Tuesday, Wednesday, Thursday and Friday from 2 to 4 p.m.
Bedminster Industrial	Adult females	14	Tuesday, Wednesday and Thursday from 2 to 4 p.m.
Lewins Mead Occupation	Low grade children and a few adult females.	30	Daily except Saturday, 9.30 a.m. to 3.45 p.m.
Park Row Industrial	Adult, male	35	Daily except Saturday, 10 a.m. to 4 p.m.

Summary of cases which have been dealt with by the Mental Deficiency Act Committee.

1ST JANUARY, 1933.				1ST JANUARY, 1932.			
Institutions	...	...	467	...	...	449	
Supervision	...	...	715	...	...	689	
Guardianship	...	...	49	...	...	38	
Pending	...	...	10	...	...	10	
1,241				...	...	1,186	

Cases in institutions, 1st January, 1933.

	Males	Females	Licence		Total
			M.	F.	
Hortham Colony ...	157	144	2	3	306
Stapleton ...	45	48	6	5	104
Chasefield ...	—	5	—	—	5
Hermitage ...	—	2	—	—	2
Stoke Park Colony	1	5	—	—	6
Eagle House ...	—	1	—	—	1
St. Mary's Home	—	1	—	2	3
Besford Court ...	4	—	—	—	4
Dovecot ...	—	1	—	—	1
Grathorne ...	—	—	—	1	1
Shirley ...	—	1	—	—	1
Rampton ...	7	9	1	—	17
Royal Fort ...	—	7	—	7	14
Stourbridge ...	1	—	—	—	1
Royal Hostel ...	1	—	—	—	1
	216	224	9	18	467

Hortham Colony.

The medical superintendent has kindly supplied the following information relative to the work of the colony as at March, 1933 :

Number of patients in residence	...	411
„ „ on licence	...	11
Total accommodation :—		
Ordinary beds		560
Hospital beds		48
		—
		608
		—

The accommodation of the colony, which is certified for all classes of patients within the meaning of the Mental Deficiency Acts, 1913-27, was described last year. Since then one workshop has been planned and erected by colony labour and is now in use as a carpenter's shop.

Officers

The public health officers of the authority have been enumerated as whole-time and part-time officers on page v of this report, whilst the staffs of the various sections will be found at the commencement of their respective sectional reports. All officers of the local authority hold the requisite certificates or qualifications required for their appointments.

Nursing in the home.

The arrangements for nursing the sick in their homes is provided in Bristol solely by private societies and institutions as detailed in my report for 1930.

In August, 1931, the Health Committee agreed to make a grant of 25/- per case to the Bristol and Clifton District Nurses Society for nursing approved cases of tuberculosis in their own homes. During the year 1932 the society undertook the nursing of 23 cases, making a total of 49 cases nursed since the arrangement began.

Laboratory facilities.

The laboratory arrangements for the examination or analysis of clinical material, water, milk and foodstuffs are the same as described in last year's report.

During the year the provisional scheme foreshadowed in my report last year, prepared by the Health Committee in conjunction with the University of Bristol, has been sanctioned by the Council, under which all pathological, bacteriological, chemical and research work required by the Corporation will be carried out by the University, in a new department to be provided and maintained by them under a professor of preventive medicine, who is to be the medical officer of health for the time being. The University will also arrange for a qualified member of the staff of the department to visit the Corporation hospitals and dispensaries to consult and advise and to assist in investigating epidemics and cases of food poisoning. Hitherto this work has been carried out partly by the University, partly by the city analyst and partly at the Corporation hospitals and dispensaries, but under the provisional agreement now reached with the University, the work will be concentrated in one centre where the University will provide the buildings and staff, and carry out all the examinations required by the Corporation at an ultimate annual cost of £5,700, which is equivalent to the present total cost to the Corporation of these services. As however, it is not expected that the new premises will be ready to receive the department of the city analyst for some time, it has been arranged to retain the chemical laboratory at Queen Square until the retirement of the present city analyst in August, 1934. Provision is made for the city analyst, who will act as senior officer of the chemical section of the new department of the University, to remain directly responsible to the Corporation as regards his duties as public analyst and for a review of the annual payment at the end of each period of two years from the commencement and for the termination of the agreement on two years' notice on either side at any time.

The University has secured commodious premises for the new department at Canynge Hall, in Whiteladies Road, which are now being adapted and equipped and will, it is hoped, be ready for occupation on the 1st October, 1933.

PATHOLOGICAL, BACTERIOLOGICAL AND CHEMICAL
EXAMINATIONS, 1932.

Nature of specimen or sample examined.	At Bristol University Laboratory	At City Laboratories	Total
SWABS for			
Diphtheria	378	9,452	9,830
Puerperal fever	11	—	11
Cerebro-spinal fever	11	—	11
Scarlet fever	4	—	4
VIRULENCE TESTS	18	—	18
SPUTUM for T.B. and other organisms	2	732	734
PUS for general organisms ...	3	—	3
" " plague (port)	5	—	5
TISSUES	3	—	3
FAECES for			
Typhoid	23	—	23
Dysentery... ..	5	—	5
Food poisoning	3	—	3
Occult blood	1	—	1
Microscopical	1	—	1
URINE for			
General analysis	4	—	4
Typhoid	2	—	2
BLOOD for			
Typhoid (Widals)	46	—	46
Dysentery	4	—	4
Culture	3	—	3
Cholesterol content	13	—	13
Calcium content	1	—	1
Films for differential count ...	1	—	1
FLUID for organisms, etc. ...	14	—	14
VACCINES—preparation of ...	1 set	—	1 set
PLAGUE examinations re S.S. " Marouka Pateras " and S.S. " Caduceus " (port)			
Examination of two maternity out-fits (32 materials).			
Post mortem on dog	1	—	1
Examination of centipede ex water	1	—	1
P.M. tissues	1	—	1
MEAT—			
Carcases of lamb	2	—	2
" " pig	1	1	2
Bacon	1	—	1
MILK (graded for tuberculosis)—			
T.B. animal inoculation ...	357	—	357
Pasteurisation	8	—	8
Abortus only	3	—	3
Special detailed examination ...	1	—	1
BUTTER for T.B. Animal inoculation test	12	—	12
CREAM for T.B. animal inoculation test	6	—	6
RATS, MICE, ETC., for plague (port) ...	531	—	531
V.D. EXAMINATIONS—			
Wasserman reactions	2,050	—	2,050
Bacteriological	2,147	—	2,147
Other examinations	65	—	65
Preparation of vaccines ...	300 doses	—	300 doses
FOOD AND DRUGS, miscellaneous ...	—	1,400	1,400
FERTILISERS AND FEEDING STUFFS...	—	15	15
RAG FLOCK	—	4	4
WATER	—	16	16
SPECIAL—			
Combustible gas on a tip ...	—	1	1
Eggs gelatinous coated ...	—	1	1
Gelatine sweets	—	4	4
Apricot pulp	—	1	1
Walnuts	—	5	5

Legislation in force.

During 1932 no additional local acts, orders, or byelaws relating to public health came into force.

Hospitals.

My report for 1930 contained a full list of hospitals (other than private hospitals) in the area, together with the type of case treated and accommodation available. There are no material changes in the hospital services to report.

In September, 1932, the Council agreed to replace the temporary wooden building for patients and staff at Ham Green Sanatorium and for certain alterations to one of the existing blocks. Plans have been prepared by Messrs. Oatley & Lawrence, Architects, which will provide accommodation for 75 patients and for the erection of a new nurses' home to accommodate a staff of 80, at an estimated cost of £59,450. It is hoped the work on these buildings will be completed during the present year.

The reports of the medical superintendents of the municipal hospitals for 1932 will be found in section ix. The following table gives an idea of the work of the voluntary hospitals :—

HOSPITAL.	Total No. of beds.	Average No. occupied	No. of in- patients	No. of out- patients
Bristol Royal Infirmary ...	426	349	8,744	68,945
Bristol General Hospital ...	275	255.45	5,312	34,251
Bristol Royal Hospital for sick children and women ...	120	72.7	1326	3,590
Cossham Memorial Hospital	90	61	1,279	1,099
Bristol Homoeopathic Hospital	76	63.7	1,304	18,545
Bristol Eye Hospital ...	45	33.63	625	13,167
Bristol Maternity Hospital and Temporary Home ...	32	7.26	190	—
Walker Dunbar Private Hospital for women and children	29	18	323	4,726

For the purpose of section 13 of the Local Government Act 1929, the Bristol Hospitals Council has been recognised by the Council, and this body is consulted on questions affecting hospital provision in Bristol. The Bristol Hospitals Council which was formed in 1929, includes the Lord Mayor, the Vice-Chancellor of the University (as chairman) and representatives of all voluntary hospitals as well as the Health and Public Assistance Committees. The medical officer of health is also a member *ex officio*.

Training of nurses.

During the year 1932, the General Nursing Council approved of Frenchay Park sanatorium and orthopaedic hospital being affiliated to the Health Committee's municipal hospital at Southmead for the training of nurses. Southmead hospital is already an approved

training school. Under this arrangement, probationer nurses who are engaged at Frenchay Park sanatorium and orthopaedic hospital for two years will be transferred to Southmead hospital to complete their training for admission to the general part of the register.

Ham Green isolation hospital has already been approved by the General Nursing Council as a training school for nurses for admission to the supplementary part of the register for fever nurses.

Health education.

During the year the public health staff continued to give health lectures to social, religious and political organisations, and meetings were addressed in addition to the usual lectures at the mothers' schools, clinics, etc.

The medical officer of health also spoke on health matters at various assemblies in the city and in every possible way due prominence was given to constructive health work and preventive measures necessary to combat disease. It is one of the duties of a public health service to try to improve the general standard of health of the people; accordingly the rule of the department is to make every endeavour to accede to requests to give lectures and demonstrations on problems dealing with public health.

In addition, the department last year continued the publication of a local edition of 3,000 copies of the journal "Better Health." The journal contains each month a supplementary page supplied by the department dealing with matters of special local interest or importance. The subjects so dealt with during the year were :—

"Maternity and child welfare in Bristol."

"Influenza."

"Notes on tuberculosis."

"Diet and health."

"Port health control."

"Notes on the school medical service."

"Meat supplies."

"Care of destitute children."

"Child dentistry."

"Prevention of tuberculosis."

"Influenza."

The journal is distributed without charge to the homes by the health visitors and mothers' schools. Copies are also supplied to elementary schools, churches, chapels, hospitals, clinics, etc., and to doctors and dentists for their waiting rooms.

Ambulance facilities.

There are no changes in the arrangements for the transport of infectious, non-infectious, accident and maternity cases to record for 1932.

Bristol is well served in the matter of ambulance facilities. Arrangements for the removal of infectious and maternity cases at all hours, are made through the public health office. Maternity cases are, by arrangement with the Public Assistance Committee, removed in ambulances owned by that committee. Non-infectious and accident cases are handled by the Bristol City and Marine Ambulance Corps, and by the St. John's Ambulance Corps, and both corps provide night and day service.

During 1932, 19,663 cases were removed to hospital in public ambulances, as follows :—

Service by	Infectious cases.	Non-infectious cases
Health Committee	1,651	—
Public Assistance Committee ...	—	3,859
City and Marine Ambulance Corps	—	6,346
St. John's Ambulance Corps ...	—	7,807
TOTAL ...	1,651	18,012

During the year a new 24 h.p. Ford ambulance was purchased by the Health Committee to replace the Fiat ambulance which has been in use for 12 years. The new ambulance provides, in addition to the driver, accommodation for an ambulance officer, a trained nurse, one stretcher case, and one sitting patient. Interesting features of the new ambulance body, which was designed by Mr. G. Adams, the foreman in charge of the ambulance station, are (1) inside body linings which give nearly two inches of insulation and (2) nutria windows which give the inmates perfect visibility while protecting them from the gaze of the public.

The Minister of Health in his survey report comments as follows :

“ It should be considered whether in the interests of economy and without loss of efficiency closer co-operation could not be effected in the provision and maintenance of the services provided by the public health and public assistance departments respectively.”

This is a matter which has been considered on previous occasions but deserves further serious consideration from both committees.

IV.—MATERNITY AND CHILD WELFARE.

The most important development to record during the year regarding the arrangements in Bristol for maternity and child welfare are the steps taken by the Council to meet the ever-increasing number of confinements at Southmead hospital in recent years. In 1932, 538 women were confined there, (as compared with 457 in 1931 and 78 in 1925) in addition to "district" work in the vicinity of the hospital. In June 1932, the Council decided to extend the existing maternity block by converting the adjacent K block permanently for maternity purposes at a cost of £1,584. The maternity department now provides 44 beds and 37 cots, including 17 beds and cots for isolation purposes, nurseries and modern steam sterilisers in both labour wards. It is estimated that the alterations will probably meet the needs of the city for some years.

The local scheme for maternity and child welfare is one of partnership between municipal and voluntary enterprise. The Bristol Infant Welfare Association exists to co-ordinate the work of the voluntary associations providing maternity and child welfare services with those organised and maintained by the local authority. In September, 1932, the Council renewed the scheme approved in September 1929 under the Local Government Act, 1929, for securing the payment of grants towards the expenses of these voluntary associations during the fixed grant period ending 31st March, 1937, amounting to £5,646 14s. 7d. per annum, subject to such services being maintained efficiently to the satisfaction of the Council. The schedule of grants provides for the payment annually of £2,036 13s. 7d. towards the expenses of four homes for mothers or babies; £925 2s. 5d. to two day nurseries; £1,574 19s. 3d. to the Bristol Infant Welfare Association; and £1,109 19s. 4d. to 20 voluntary infant welfare centres.

In his survey report the Minister of Health referred to the maternity and child welfare services in the following terms :—

"The Minister notes with pleasure the sustained efforts which have been made for the development of the maternity and child welfare work in the city, both by the Council and by the Infant Welfare Association, the good work which has been done generally in this service, and in particular the success which has attended the ante-natal service. He regards the adequate provision of maternity beds as an important part of the maternity and child welfare service, and he has noted with interest the extension of the midwifery work at Southmead Hospital . . ."

1932.

INFANT MORTALITY.

Deaths from stated causes under ONE year.

Total 1931	CAUSE OF DEATH	Under 1 Day	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under one month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total 1932	Deaths in Quarters			
																				1st	2nd	3rd	4th
...	Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	Chicken-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	Scarlet fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	Whooping cough ...	...	...	...	...	...	...	3	...	...	...	1	2	2	2	3	1	1	15	5	7	2	1
1	Diphtheria and croup ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Erysipelas ...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	1	1	...	5	1	3	...	1
3	Tuberculous meningitis ...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	3	2	1	...	...
...	Abdominal tuberculosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	Other tuberculous diseases ...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	...	...	1	5	1	2	2	...
6	Meningitis (not tuberculous) ...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	3	1	1	1	...
8	Convulsions ...	1	3	...	...	...	4	...	...	1	1	...	...	...	...	...	1	...	7	2	3	...	2
...	Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Bronchitis ...	...	...	...	...	1	1	2	1	1	...	1	...	...	...	2	...	...	8	4	1	2	1
58	Pneumonia (all forms) ...	...	3	2	3	1	9	6	4	5	5	1	2	...	3	6	2	4	47	16	15	3	13
3	Influenza ...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	1	4	2	...	...	2
1	Diarrhoea ...	...	...	1	...	...	1	...	...	...	...	...	2	...	1	...	...	1	5	...	1	4	...
14	Enteritis ...	...	...	1	...	2	3	5	7	2	4	...	1	2	...	...	...	1	25	2	7	5	11
1	Gastritis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Syphilis ...	...	...	...	...	...	...	1	...	1	1	...	1	...	...	...	...	1	5	2	2	...	1
...	Rickets ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...
1	Found dead ...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...
5	Suffocation, overlaying ...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	3	1	1	...	1
6	Injury at birth ...	4	2	1	1	...	8	...	...	...	...	...	...	...	...	...	...	8	2	2	2	2	2
13	Atelectasis ...	4	7	...	...	...	11	...	...	...	...	1	...	...	...	...	...	12	1	4	3	4	4
33	Congenital malformations ...	9	17	5	1	2	34	3	3	...	2	...	...	...	1	...	...	43	11	9	15	8	8
75	Premature birth ...	35	16	6	6	3	66	9	3	...	1	...	...	...	...	...	...	79	29	18	16	16	16
26	Atrophy, debility & marasmus ...	1	4	2	2	1	10	3	...	...	...	...	...	...	...	...	...	13	8	...	4	1	1
21	Other causes ...	1	3	1	1	1	7	1	1	...	2	...	2	...	2	1	...	19	5	4	6	4	4
307	Totals ...	58	55	19	14	12	158	34	21	11	21	5	11	5	13	13	5	15	312	97	82	65	68

1931		1932			
		Males	Females	Total	Infant mortality rate.
290	Legitimate	183	115	298	51 per 1,000 legitimate births.
17	Illegitimate	7	7	14	64.5 per 1,000 illegitimate births.
307	Total	190	122	312	51.4 per 1,000 births.

Statistics, 1932.

	Rate per 1,000 births			Net Deaths.				
	1931	1932		1932	1931	1930	1929	1928
Maternal Mortality {	1.32	.66	Puerperal sepsis ...	4	8	9	8	3
	1.82	1.98	Other puerperal causes	12	11	13	19	12
	3.15	2.64	All causes	16	19	22	27	15
Infant Mortality {	50.8	51.44	Deaths under 1 year	312	307	359	365	372
	26.7	26.05	„ „ 1 month	158	161	198	194	184

It is gratifying to be able to report that the vital statistics for 1932 relating to maternity and child welfare are again satisfactory. There was a slight increase in the infant mortality rate, but the maternal mortality was lower. Details of the causes of deaths of mothers and infants will be found in tables on pages 35 and 37.

Infant mortality

During the year the deaths of 312 infants under one year of age were recorded, or five more than the net deaths registered in 1931. This figure increases the infant mortality rate reported last year—the lowest on record—by 0.6 to 51.4 per 1,000. The rate for England and Wales was 65 per 1,000 births and 69 for all county boroughs.

Fluctuations from year to year are of course inevitable in a rate so sensitive as the infant mortality rate. The rate this year is still 10 per 1,000 births below that for the quinquennium 1926/30 and 50 per 1,000 below that for 1911/15. Moreover, the rate consistently remains lower than the rate for England and Wales, and the table on page 16 shows that Bristol had the lowest infant mortality rate of the eleven largest industrial towns.

The principal causes of infant deaths in order of numerical importance were prematurity (79), pneumonia (47), congenital malformation (43), diarrhoea and enteritis (30), whooping cough (15), atrophy, debility and marasmus (13), and atelectasis (12). This order of precedence is practically the same as last year, except that deaths from whooping cough occupy the position taken by measles in 1931.

The group of diseases covered by such causes as prematurity, malformations and injury at birth accounted for 49.3 per cent. of the total infant deaths, followed by respiratory diseases, 18.9 per cent., infectious diseases, 9.0 per cent., while diarrhoea and enteritis which up to 1915 occupied a high position amongst causes of infant mortality accounted for 9.6 per cent. of the total deaths last year, although this is 2.4 per cent. higher than in 1931. The rise in the rate may be attributed solely to the prevalence of whooping cough last winter, nearly 50 per cent. of the deaths occurring amongst infants under one, and all of them under five years of age.

As in previous years, more than one half (50.6 per cent.) of the deaths of infants occurred under one month—a neo-natal mortality rate of 26.05 per 1,000 births compared with 26.7 last year. Of these deaths in the first month, 36.7 per cent. occurred on the first day of life and 34.8 per cent. in the first week. Approximately 70 per cent. of the neo-natal deaths were due to prematurity and other congenital defects.

Illegitimate death rate.

Of the 217 illegitimate births registered during the year, 14 or 6.4 per cent. died before reaching the age of one year which is equal to an illegitimate infant mortality rate of 64.5 compared with 86.3 in 1931. The legitimate rate per 1,000 legitimate births was 51.

Maternal mortality, 1932.

Cause of death	All ages	Age groups			Deaths in institutions	Deaths in districts						
		15 and under 25	25 and under 45	45 and under 65		Ashey	South	Central	Clifton	St. George	Stapleton	Westbury-on-Trym
Puerperal sepsis ...	3	1	2	...	3	...	2	...	...	1	...	...
Septic abortion ...	1	...	1	...	1	...	...	...	...	1	...	...
Other puerperal causes ...	...	...	...	...	...	...	...	...	...	...	...	...
Placenta praevia ...	1	...	1	...	...	1	...	...	...	...	...	...
Post-partum haemorrhage ...	1	...	...	1	...	...	1	...	...	...	...	...
Obstetric shock ...	1	1	...	...	...	...	1	...	...	...	...	...
Do. Caesarean section ...	3	...	3	...	1	...	...	...	...	1	2	...
Ruptured uterus ...	1	1	...	...	1	...	...	...	...	...	1	...
Embolism ...	1	...	1	...	...	...	...	1	...	...	...	...
Ruptured ectopic gestation ...	2	...	2	...	2	...	1	...	...	...	...	1
Intestinal obstruction —caes. sect. ...	1	...	1	...	1	1	...	...	...	...	...	...
Puerperal toxæmia ...	1	1	...	...	1	...	...	...	...	1	...	...
Total ...	16	4	11	1	10	2	5	1	...	4	3	1

The number of Bristol mothers who died last year from causes directly connected with child birth was 16, of which 4 were due to puerperal infections. This gives the lowest rate since 1924. The table above details the causes of death in puerperal cases by ages and districts.

Investigation into the causes of maternal deaths and puerperal fever or puerperal pyrexia is carried out by the medical officers of the maternity and child welfare section. Since 1928 the results of these enquiries have been forwarded to the Ministry of Health.

The committee have provided all the facilities set out in memorandum 156/M.C.W. with the exception of home helps, a scheme for which has not been adopted in this city.

Altogether there are ten municipal ante-natal clinics, where expectant mothers may obtain advice, both medical and social. Arrangements have been made for the systematic following up of patients attending the clinic. The women are also advised to attend for examination after confinement.

The services of consultants in cases of difficult labour and puerperal fever are at the disposal of any doctor when required, and an arrangement has been made with the Bristol General Hospital for the admission of cases of complicated labour, if necessary.

Arrangements have been made for the pathological examination of material submitted by doctors.

There is adequate provision for patients needing institutional treatment on medical grounds, and also on account of unsatisfactory home conditions.

In addition to the work of the 45 midwives in private practice, confinements are taken by the extern staffs attached to the Bristol Royal Infirmary, Bristol General Hospital and Southmead Hospital. This gives an adequate supply of district midwives.

Sterilised maternity outfits are supplied to patients at cost price, and milk is supplied to necessitous expectant and nursing mothers on the recommendation of the medical officer of a clinic or infant welfare centre.

REPORT BY MARGUERITE HUGHES, M.B., CH.B.,
Assistant Medical Officer of Health.

Staff.

Chief assistant medical officer	...	M. G. Hughes, M.B., Ch.B.
Assistant medical officer	...	G. Hartley, M.D., M.M.
"	"	A. A. Craig, M.B., B.S., D.P.H.
"	" (part-time)	L. A. Baker, B.A., M.B., B.Ch., F.R.C.S.I.
"	"	D. M. Pullen, M.B., Ch.B.
"	"	H. L. Shepherd, Ch.M., M.B.
Principal sister	...	Miss L. Elkins.
(also superintendent school nurse)		
Inspector of midwives	...	Miss W. M. Richards.
Superintendent health visitor	...	Miss I. M. Ralph
Health visiting staff, 24; clerks, 6.		

Midwives.

Midwives giving notice of intention to practise	135
Midwives with training qualifications	132
<i>Bona-fide</i> midwives	3
Midwives in private practice	57
Midwives attached to institutions	78

The number of midwives practising in the area at the end of the year was 45 in private practice, and 53 attached to institutions.

The district of Avonmouth and Shirehampton is now adequately served by qualified midwives and the agreement under which the Council guaranteed a minimum income of £160 per annum to a midwife in this area was terminated on the 31st December, 1932.

Supervision.

Midwives inspected	...	...	...	...	54
Routine inspections	...	...	...	...	241
Unsatisfactory conditions reported	...	...	...	...	3
Failure to send in C.M.B. forms	...	...	...	...	3

Each midwife in private practice was visited at her house at least four times during the year when her registers, bag, instruments, etc., were inspected; these visits were purposely surprise visits. Other visits, in addition to the routine quarterly visits, are made as occasion warrants. The unsatisfactory conditions referred to above were minor matters which were dealt with by the inspector at the time.

No midwives were interviewed by the medical inspector, or reported to the Central Midwives' Board.

C.M.B. Forms received.

	1931	1932
Form A—medical help	1,228	1,097
„ B—deaths	25	30
„ C—stillbirths	83	78
„ D—laying out the dead	2	4
„ E—liability of infection	42	39
„ F—artificial feeding	52	67

Analysis has been made of “A” forms received during the year. The following table indicates the nature of the conditions for which medical help was called in :—

Threatened abortion	...	...	...	...	3
Abortion	...	...	...	...	7
Albuminuria	...	...	...	...	11
Prematurity	...	...	...	...	11
Ante-partum haemorrhage	...	...	...	...	34
Delayed labour	...	...	...	...	135
Complicated labour	...	...	...	...	8
Ruptured perineum	...	...	...	...	280
Adherent placenta	...	...	...	...	26
Post partum haemorrhage	...	...	...	...	18
Raised temperature	...	...	...	...	39
Feebleness of child	...	...	...	...	27
Discharging eyes...	...	...	...	...	246
Rash	...	...	...	...	7
Other causes	...	...	...	...	245
Total	...	...	...	...	1,097

Compensation to Midwives for loss of work.

A midwife can claim compensation for a case which she had sent to an ante-natal clinic if that case, owing to some abnormality has to be referred to an institution for confinement. Nine such claims were received during the year.

Claims for Medical Fees.

There were 331 claims made by medical practitioners for attendance on emergencies at confinements under section 14 of the Midwives' Act, 1918 ; this is an increase of 97 over 1931.

The Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulation, 1926.

Fifty-eight notifications of puerperal fever and puerperal pyrexia were received during the year; of these, 14 were notified as puerperal fever and 44 as puerperal pyrexia. The corresponding figures last year were 23 and 39. The attack rates per 1,000 total births (i.e., live and still-births registered) are shown below compared with the rates for England and Wales :—

1932	Puerperal fever	Puerperal pyrexia
Bristol	2.2	6.9
England and Wales ...	3.3	8.5

The causes of puerperal fever were detailed as follows :—

Pyelitis	2
Septicaemia	5
Difficult labour	2
Peritonitis	2
Mastitis	3

Eleven cases were removed to hospital for treatment.

Investigations were made in 29 cases of puerperal pyrexia, and the causes were given as follows :—

Pyelitis	9
Sapraemia	1
Uterine sepsis	1
Bronchitis and influenza	1
Mastitis and breast abscess	4
Ante partum haemorrhage	1
Post partum haemorrhage	1
Perineal sepsis	1
Thrombosis	1
Phlebitis	2
Cystitis and <i>B. Coli</i> infection	1
Laryngitis	1
Gonorrhoea	1
Miliary T.B.	1
Difficult labour	3

Under the scheme for assistance in cases of complicated labour, puerperal fever, and puerperal pyrexia as approved by the ministry, 22 cases were referred to consultants. There was no application for nursing in the home where removal to hospital was not possible.

Public Health (Ophthalmia Neonatorum) Regulations, 1926.

Forty notifications of ophthalmia neonatorum were received during 1932. The cases were visited by a health visitor on the day of receipt of notification as in former years, with the object of securing proper attention by a doctor or institution, and cases were kept under observation to see that the prescribed treatment was carried out. Recovery with vision unimpaired is reported in all cases.

The following table gives the results of cases notified during the last six years :—

Year	Noti- fica- tions	Treated		Re- cov- ered (vision unim- paired)	Lesser injury to sight	Blindness		Death before re- covery	Result un- known at end of year	Live births noti- fied	Cases per 1,000 live births
		at home	in hospi- tal			both eyes	one eye				
1927	39	38	1	33	nil	nil	nil	1	5	6,474	6.02
1928	37	29	8	33	nil	nil	1	nil	3	6,554	5.6
1929	25	22	3	25	nil	nil	nil	nil	nil	6,270	3.9
1930	19	15	4	18	nil	nil	nil	1	nil	6,532	2.9
1931	22	18	4	19	nil	nil	nil	nil	3	6,300	3.4
1932	40	36	4	40	nil	nil	nil	nil	nil	6,287	6.3

Eye cases other than ophthalmia neonatorum.

Similar care and attention is observed in less serious eye cases reported by midwives or discovered by the district health visitors, and free issues of boracic crystals and cotton wool swabs are made, when required. During 1932 the number of cases dealt with was 307, involving 1,570 visits.

The importance of early and immediate treatment for discharging eyes has been repeatedly brought to the notice of all midwives, and it is encouraging to note that during the year 246 "A" forms for medical help were sent in for this condition.

Ante-natal and post-natal work.

There are nine municipal ante-natal clinics and one post-natal clinic holding 13 sessions per week ; 2,721 new patients (2,166 in 1931) have attended, the total number of attendances being 13,756 (10,839 in 1931), making an average per session of 21.5 (19.9 in 1931).

Thirty-six maternity outfits have been sold at cost price to expectant mothers at the clinics, and maternity bags have been lent to 20 mothers.

In addition to this municipal ante-natal provision, the Bristol Royal Infirmary and Bristol Maternity Hospital insist that all women who are to be attended by the maternity staffs shall attend their ante-natal clinics.

A grant is made to the Bristol General Hospital towards their ante-natal clinic. In return for this the hospital gives special consideration to cases of complicated labour referred to them by the Maternity and Child Welfare Committee.

Maternity beds.

The number of maternity beds available in the city at the end of 1932 was 125.

Notification of Births Act, 1915.

During the year, 6,550 notifications of births were received under this Act, including 263 still-births. Of these, 1206 cases were notified by doctors, 4,869 by midwives, and 475 by relatives. The sex of the cases was as follows :—

sex.	living.	dead.
Males ...	3,200	156
Females ...	3,087	107
Totals { 1932	6,287	263
{ 1931	6,300	260

Comparative table of notified births.

Year	Births in institutions and nursing homes.		Births in Southmead Hospital		% of births in all institutions to total births.	% attended by doctors.	% attended by midwives.
	Living	Dead	Living	Dead			
1922	1,026	48	52	6	14.4	28.3	57.3
1923	1,198	83	73	3	17.6	26.3	56.1
1924	1,344	81	77	2	20.5	24.5	55.0
1925	1,353	99	67	3	21.1	24.1	54.8
1926	1,552	101	102	3	24.8	23.1	52.1
1927	1,681	107	124	5	28.5	22.7	48.8
1928	1,757	116	123	2	29.2	23.4	47.4
1929	1,685	101	232	18	31.1	22.3	46.6
1930	1,627	113	406	11	31.7	23.6	44.7
1931	1,623	93	450	21	33.3	23.4	43.3
1932	1,855	127	524	20	38.5	21.5	40.0

Stillbirths.

Total number of notifications ...	263
Information obtained ...	238
Information unobtainable ...	25

Doctors' cases—44. Midwives' cases—68. Institution cases—126.

LEGITIMACY.

Legitimate ...	234
Illegitimate ...	4
—	238

PERIOD OF GESTATION.

Full time ...	143
Premature ...	93
Post Mature ...	2
—	238

Ante-natal treatment was unsatisfactory in thirty cases.

CAUSES OF STILLBIRTHS.

		1932	1931
TOXAEMIA	Syphilis	7	4
	Albuminuria... ..	26	14
	Eclampsia	4	4
	Other maternal diseases	20	6
MECHANICAL	Placenta praevia	15	—
	Prolapse of cord	8	6
	Ante-partum haemorrhage...	11	22
DEVELOPMENTAL	Foetal abnormality	22	30
	Premature twins	11	2
	Prematurity... ..	9	6
	Post maturity	2	—
	Hydramnios... ..	5	—
TRAUMATIC	Asphyxia	9	1
	Craniotomy	2	—
	Intra-cranial haemorrhage	3	6
	Difficult delivery	64	59
CAUSE UNKNOWN		20	22
Total		238	182

Assistance at Confinement.

In 1932 there were 825 applications by patients for assistance at confinements, as follows :—

	1931	1932
Application for maternity beds... ..	534	649
Application for midwives' fees	88	94
Application for Southmead Hospital Nurses...	—	82
	622	825

Clinics and treatment centres.

The number of clinics and treatment centres for the area remain as published last year. During the year, however, a post-natal session has been opened at the Southmead centre.

There are three municipal maternity and child welfare centres ; these are at Fishponds, Southmead and Bedminster Down.

The Bristol Infant Welfare Association and Council of Schools for Mothers is responsible for 23 mothers' schools ; at two of these, the medical officer and health visitor in attendance are supplied by the Maternity and Child Welfare Committee. Altogether health visitors attend nine sessions weekly at mothers' schools.

Attendances at the infant welfare centres.

1931		1932	Attended for first time	Total number of attendances
First	Total			
2,275	24,582	Children under 1 year of age	3,398	35,274
839	35,736	Children between the ages of 1 and 5 years ...	17,46	34,887
3,114	60,318		5,144	70,161

Artificial Sunlight clinic.

Four sessions per week are held, and the total attendances last year were : 6,001.

RESULTS OF SUNLIGHT TREATMENT.

Disease.	Under treatment end of 1931	New cases in 1932	Much improved	Discharged		Did not complete the course	Under treatment-end of 1932
				Improved.	Stationary		
Debility ...	15	111	23	36	9	39	19
Malnutrition ...	8	73	16	22	6	25	12
Rickets ...	13	78	13	29	8	23	18
Knock-knees ...	1	7	3	3	1	1	0
Bow-legs ...	3	14	5	7	0	5	0
Bronchial Catarrh ...	7	44	11	18	2	13	7
Asthma ...	0	3	0	1	0	2	0
Glands of neck	6	14	3	11	1	3	2
Anaemia ...	6	27	5	9	2	12	5
Skin diseases	2	3	1	1	0	3	0

Altogether 556 new cases attended at the clinic during the year, but of these a certain number were not considered suitable for treatment, and others only received one exposure, and are, therefore, not included in the above figures.

Mothercraft clinic (infant feeding).

Four sessions are now held each week. The cases dealt with are those of infants in whom unsatisfactory conditions have arisen as a result of wrong or mismanaged feeding, whether breast or artificial.

The time of one health visitor, who has been especially trained for the purpose, is entirely given up to this work. In addition to attendance at the clinics she has paid 405 visits during the year, and by arrangement with the Bristol Infant Welfare Association has given 42 lectures at infant welfare centres. The number of patients attending the clinic during 1932 were :

	New	Total	Average attendance per session.
1932 ...	458	4,361	23 (approx.)
1931 ...	431	3,995	21 („)

Minor ailment clinics.

By arrangement with the Education Committee all cases of minor ailments in children under the age of five can be treated at any of the school clinics, of which there are five in the city : 454 children received treatment at these clinics during the year.

Nursery school.

A nursery school for children from two to five years of age was opened in September by the Education Committee in St. Werburgh's. The medical supervision of this school and that of the nursery class at Castle Green school is carried out by the maternity and child welfare department, a medical officer and health visitor attending regularly. A full report of the school is given in the annual report of the school medical officer.

Day nurseries.

There is a day nursery at 12, Dowry Square, Hotwells, and the Bristol Day and Night Nursery and Training Centre at 27-29 Ashley Road, where children are taken temporarily, and also as residents during illness of the mother.

Milk grants.

The following table gives particulars of the grants made during the year :—

GRANTS.				Total	Cost of milk orders.
Expect- ant mothers	Nursing mothers	Children under 3 years	Children between 3-5 yrs.		
553	1,938	3,220	1,527	7,238	£3,102 5 1

Dental Treatment.

Dental treatment for expectant and nursing mothers and children up to five years of age is carried out at the clinics under the control of the Education Committee.

Particulars of treatment are given in the following table :—

	Year	Expect- ant mothers	Nurs- ing mothers	Infants			
New cases treated	1928	47	93	191			
do.	1929	51	137	252			
do.	1930	54	155	302			
do.	1931	39	154	211			
do.	1932	84	193	591			
No. of attend- ances for treatment	1928	128	487	497	Dentures supplied	1928	64
do.	1929	146	432	584	do.	1929	106
do.	1930	178	568	997	do.	1930	127
do.	1931	152	754	1,235	do.	1931	142
do.	1932	237	738	1,396	do.	1932	162

The total cost to the Council (including £421 1s. 1d. for dentures) amounted to £799 16s. 1d.

Diphtheria Immunisation.

The number of children immunised against diphtheria from January 1st to December 31st, 1932, was 413, and the total attendances 1,346.

Health visiting staff.

The growth of the work of the department has resulted in a great increase in the work of the health visitors whose duties remain as described last year with the addition of duties connected with the medical supervision of children attending the new nursery school in St. Werburgh's, and nursery class at Castle Green.

The total number of visits paid by the health visitors was 126,533; this is an increase of 16,630 on 1931.

Training course for health visitors.

The course of training for health visitors described in the annual report for 1930 was held during 1932. Sixteen students entered for the course, including one home nurse one tuberculosis dispensary nurse and two school nurses employed by the Corporation. All entrants succeeded in obtaining the diploma.

Orthopaedic treatment.

The systematic visiting of children under five years in their own homes by the health visiting staff is invaluable for securing early recognition of physical defects likely to give rise to crippling and for appropriate measures to be taken.

Arrangements have been made for children suffering from crippling defects to be referred to one of the school clinics for examination by the orthopaedic specialist, any minor treatment being carried out at the clinic. Hospital facilities for patients requiring operative treatment are available at Southmead Hospital, Frenchay Park Sanatorium and Winford Hospital.

Children Act, 1908.

During the year notifications as required under the provisions of part I of the Act have been received, as follows :

Children received for weekly payment	...	75
„ „ „ total sums	...	1

On December 31st, 1932, the total number under supervision was 192, and the number of persons on the register as receiving children was 167.

Children's Homes.

Staff.

Visiting medical officer	...	J. A. L. Roberts, M.B., B.S.
„ „ „	...	E. V. Foss, M.B., Ch.B.
Superintendent and matron		Mr. & Mrs. W. E. Twaits.

Assistant superintendent, 1 ; needlework instructress, 1 ; foster mothers and reliefs, 24 ; foster father, 1 ; domestic staff, 15.

BABIES' HOME.

Visiting medical officer	...	Dr. G. Hartley.
--------------------------	-----	-----------------

Sister, 1 ; nurses, 8 ; domestic staff, 4.

The administrative scheme under the Local Government Act, 1929, made by the Council on the 30th July, 1929, provided that the functions of the Public Assistance Committee, in so far as they relate to the maintenance of poor children apart from their parents should be discharged on behalf of and subject to the general direction and control of the Public Assistance Committee by the Health Committee as from the 1st April, 1930. This delegation included the Boarding-out Order, 1911.

Children's homes.

My report last year detailed the situation and nature of the accommodation provided in the cottage and scattered homes. On the 31st December, 1932, the number of children in the homes was as follows :—

	Over 16.	From 3-16	Under 3	Total
Headquarters Homes ...	—	43	—	43
Cottage Homes ...	—	125	32	157
Scattered Homes ...	—	35	—	35
Service Boys ...	12	—	—	12
	12	203	32	247

At the end of September, 1931, the Service Boys were transferred from Pritchard Street to 254 and 256 Charlton Road, and are under the charge of a foster father and mother.

During the year under review, 85 children were admitted to the homes, and 138 discharged. Under the latter heading, 31 children were sent into service, 72 placed in the care of relatives, 10 boarded out, and 25 sent to special homes or institutions.

Boarded-out children.

On the 31st December, 1932, the following children were under the supervision of boarding-out committees, with whom agreements under the Boarding-out Order, 1911, were in existence :—

Ashbourne	10 children
Bristol	68 „
Olveston	4 „
Stonehouse	3 „
Winterbourne	6 „
WILTS COUNTY COUNCIL—	
Bradford area	1 child
Trowbridge „	1 „
Warminster area	2 children
Other Unions	6 „
101	

During the year 26 children were boarded out, chiefly with relatives, seven children obtained situations, thirteen temporary cases returned to relatives, two were accepted by other authorities, and three sent to special institutions, leaving a total of 101 children boarded-out at the end of the year.

Unmarried mothers.

The work done in connection with unmarried mothers continues to show a steady increase. This work is carried out by Mrs. Stott, the welfare officer to the Public Assistance and Health Committees. She assists the mothers during the ante-natal period, making suitable arrangements for the confinement, and gives such post-natal care and supervision as is required.

During the year 133 applications from unmarried mothers, or in respect of an illegitimate child, were received, and of this number

109	sought help in respect of the first illegitimate child.
17	„ „ „ second „ „
6	„ „ „ third „ „
1	„ „ „ seventh „ „

There were in addition 24 unmarried mothers who had made application for assistance previously, but for whom definite arrangements had not been made.

The 157 cases were dealt with as follows :—

- 98 admitted to Southmead Hospital.
- 19 confined at mother and baby homes.
- 21 other assistance given in confinement, or assistance not needed.
- 1 transferred to another area.
- 6 application withdrawn.
- 12 arrangements not completed.

Twenty-four girls were sent to mother and baby homes, thirty-three to the Diocesan Refuge or Elm House, and five to other special homes.

The Salvation Army Home in Bristol for mothers and babies have now made arrangements for confinements to take place in the home instead of at Southmead Hospital.

During the year the sum of £2,780 7s. 6d. was collected. Of this sum, £106 13s. 4d. was paid to the city treasurer in respect of maintenance of babies born at Southmead, or mother and baby homes, for whom affiliation orders or agreements were later obtained. £949 15s. 10d. was paid to the Public Assistance Committee's collecting officer, being money paid at Court or privately under separation and affiliation orders for people chargeable to the committee. The balance, approximately £1,723 18s. 4d. was paid to mothers and foster-mothers of illegitimate children.

Affiliation orders obtained ...	...	33
Maintenance orders obtained ...	...	4
Private settlements obtained ...	...	31
Applications unsuccessful at Court		1

Institutional provision for unmarried mothers, illegitimate infants, and homeless children.

The institutional provision for these cases remains as published last year, with the following amendments :—

Bristol Maternity Hospital.

Beds increased from 12 to 30.

Victoria Gibbs Memorial Home.

The number of babies received is now limited to 29.

The Nursing Homes Registration Act, 1927.

Staff.

Medical inspector ...	Dr. M. G. Hughes.
Nurse inspector ...	Miss W. M. Richards.

Two applications for registration under the Nursing Homes Registration Act, 1927, were received during the year. These are awaiting the decision of the committee.

Total figures to end of 1932 :—

	Maternity Homes.	Other Nursing Homes.
No. of applications for registration ...	10	48
Applications withdrawn	2	11
No. of homes registered	8	25
Applications pending	—	2
No. of orders made refusing or cancelling registration	1	7
No. of appeals against such orders	—	—
No. of cases in which such orders have been :		
(a) Confirmed	—	—
(b) Disallowed	—	—
No. of applications for exemption from registration	1	10
No. of cases in which exemption has been :		
(a) granted	—	8
(b) withdrawn	—	2
(c) refused	1	—
Inspections by sanitary staff :		
Visits by inspector	—	8

V.—SANITARY CIRCUMSTANCES.

Water.

Details of the sources of the water supply were given in my report for 1930, and there has been no important extension during the year. In order to ensure the maintenance of an adequate supply to the district the Company will shortly put in hand the construction of a new reservoir at Cheddar which will hold 1,200,000,000 gallons. Periodical chemical and bacteriological analyses of the supply made by the city analyst (see page 139) show that a high standard of purity is maintained. The general manager of the Company has kindly supplied the following data for 1932 :—

Length of new distribution mains laid	...	6 miles.
Gallons of water supplied to the district	...	4,967,928,000
No. of dwelling houses connected to mains	...	93,506
Average daily supply for domestic purposes per head of population		24.12

The rainfall in Bristol was 4.35 inches above the average for the last 77 years.

The number of notices served by the sanitary department to secure a proper water supply was 17, and five polluted wells were closed, supplying 13 houses.

Drainage and Sewerage.

The city engineer reports :—

No alteration to the system of sewerage or sewerage disposal in the city was made during the year 1932. The city is completely sewered, few cesspools exist, and no dry systems are in use.

The length of public sewers is approximately 442 miles, about 11 miles of new sewers having been laid or included in new streets declared highways since my report for year ended 31st March, 1931.

During the year, various old sewers have been reconstructed or improved with the object of the prevention of flooding in times of heavy rainfalls, and sewers have been laid to take the drainage of new housing estates.

Some of the principal works carried out were :

Wellington Hill flood relief scheme.

The level of the ornamental lake adjoining the house known as "Waterdale" has been lowered 18 inches, and the lake deepened a corresponding amount to maintain the same depth of water. An overflow weir wall has been constructed at the outlet, and so designed that the water level of the lake will never rise more than 6 inches above the weir ; this will ensure that the 36 inch pipe sewer from Wellington Hill and the stormwater sewer from the Cherington Road district will not become surcharged during heavy rainfall, and so prevent flooding as in the past.

Downend Road, Horfield.

The properties in this road are drained into a 15 inch pipe sewer, which in turn was connected to a 9 inch sewer ; this reduction in

capacity retarded the free flow of water in times of heavy rainfall, causing flooding.

The smaller sewer has now been replaced by a 15 inch sewer laid on a shorter route and improved gradient to obviate the trouble.

Lyppiatt Road, St. George.

To relieve flooding in the Lyppiatt Road and Chalks Road districts, two brick culverts have been constructed, one 3ft. 2in. deep by 3ft. 6in. wide from Chalks Road to Lyppiatt Road, 108 lineal yards in length, and the other 3ft. 8in. deep by 3ft. 6in. wide from Lyppiatt Road to Victoria Road, 157 lineal yards in length. These culverts replace an old one, which was inadequate and in bad condition.

Station Road, Shirehampton—relief sewer.

This work, which is now in progress, consists of the construction of a relief sewer with an overflow in the tidal river Avon capable of taking the storm water from the whole of the drained area in the immediate neighbourhood, thus relieving the present combined sewer which has become overloaded, causing frequent flooding. The sewer is being constructed of concrete tubes ranging in diameter from 30 inches at the outfall to 18 inches at the end of the existing sewer. Overflows at various points from the present sewer are being constructed, and storm water sewers picked up en route. The sewer under construction can be extended as necessity demands.

Sea Mills culvert.

This is the construction of a 14-ft. diameter semi-circular brick culvert bridging the river Trym at Sea Mills for a proposed new 40-ft. road, connecting Sea Mills lane to Sea Mills housing site, and the work is now in progress.

Rivers and streams.

No special action in regard to river pollution was found necessary during the year.

Closet accommodation.

The sewage of the city is discharged into the tidal portion of the River Avon by means of the water carriage system.

There are no earth closets or privies in the city.

Many closets in the city are without flushing appliances. Most of these closets consist of the glazed lining or the cottage pan and syphon trap types, and several are situated outside houses which are also provided with indoor closets having flushing cisterns. The few existing brick trunk closets are being replaced by modern pattern water closets.

Public Cleansing.

Collection and disposal of house and trade refuse.

The number of mechanical vehicles engaged on this work was increased during the year by the purchase of six Morris and one Bedford petrol lorry chassis, to which special low-loading bodies

with sliding covers were constructed and fitted at the corporation workshops.

These vehicles are proving very successful for this class of work, both as to speed of collection and cost. At the end of the year 1932 there were twenty-five mechanical vehicles being used for refuse collection—these dealt with 38 per cent. of the total collection, the remainder being collected by horse-drawn vehicles.

Under the special powers conferred by section 95 of the Bristol Corporation Act, 1926, the service of notice upon owners of property to provide ashbins of approved pattern was continued during the year.

The city is being dealt with in wards, and up to the 31st December, 1932, 17,148 bins have been supplied on hire by the corporation, and a large number provided privately. Proceedings have been instituted against a number of owners for non-compliance with the notices served, and penalties inflicted, except in cases where bins have been provided before the summonses were heard when the cases were withdrawn upon payment of costs.

Thirty-seven per cent. of the refuse is incinerated at two refuse destructors and the remainder sent to tips, where it is deposited on the lines advised by the Ministry of Health (known as "controlled tipping.")

There are very few cesspools within this city, and these are in the rural parts—the owners or occupiers of houses so drained are responsible for the cleansing and disposal of contents.

SANITARY INSPECTION OF THE AREA.

Report by J. A. ROBINSON, Chief Sanitary Inspector.

Staff.

Chief sanitary inspector ... J. A. Robinson, F.S.I.A.

Superintendent sanitary inspector ... T. J. Cleal.

District sanitary inspectors, 16; clerks, 4; inspectors' labourers, 4; ratcatchers (including port ratcatchers), 4.

Analysis of work done by district inspectors, 1932.

No. and Nature of Inspections.		Houses	Common	Factories
No. of complaints received and attended to—2,023.	District.	let-in lodgings.	lodging houses.	and work-shops
No. of visits for all purposes ...	36,970	1,167	669	1,568
„ house to house inspections ...	336	—	—	—
„ dwelling houses inspected ...	3,934	634	446	—
„ other premises inspected ...	1,336	—	—	550

INSPECTIONS OR VISITS IN CONNECTION WITH :—

Bathroom geyser ventilation ...	190
Dirty premises ...	138
Entertainment places ...	159
Rag and bone dealers ...	19
Offensive trades (other than fried fish shops)	143
Tents, vans and sheds ...	393
Underground rooms ...	9
Piggeries ...	17
Stables ...	3
Refuse tips ...	9
Public drinking fountains ...	51
Schools (sanitary accommodation) ...	46
Infectious disease ...	45
Gas poisoning ...	1

Notices served :—

NATURE.	District	Houses	Common	Factories
		let-in lodgings	lodging houses	and work-shops
No. of informal notices served ...	1,761	141	1	124

FORMAL NOTICES AND ORDERS SERVED—

For abatement of nuisances, etc. ... 124 notices.

For repair of private party drains ... 26 drains, taking the drainage of 172 properties.

For paving of private passages ... 8 passages used by occupiers of 107 properties.

Results of the service of notices :—

GENERAL SANITARY WORK EFFECTED.	District	Houses let-in lodgings	Common lodging houses	Factories and work- shops
No. of drains entirely relaid	367	6	—	6
„ drains partially relaid	791	37	1	21
„ scullery sinks fixed	683	24	—	6
„ sinks, drains, etc., trapped	1,106	26	2	16
„ W.C.'s fitted with new pans and traps	870	42	2	30
„ W.C.'s repaired and cleansed	283	48	—	80
„ W.C.'s provided with flushing apparatus	841	45	—	23
„ additional W.C.'s provided	82	5	—	11
„ roofs repaired	943	86	2	27
„ eaves gutters and rain water spouting repaired, etc.	828	51	—	19
„ yards, passages, etc. paved or repaired	865	101	—	13
„ rooms, passages, etc. cleansed, re- papered or distempered	1,710	919	200	85
„ damp premises remedied	482	11	—	1
„ premises supplied with Company's water	27	—	—	3
„ cases of overcrowding in dwelling- houses abated	81	21	—	—
„ dustbins provided	23	10	—	2
„ offensive accumulations removed	253	22	—	9
„ cases of animals improperly kept	28	2	—	—
„ cesspools abolished	26	—	—	—
„ polluted wells closed	6	—	—	—
„ manure pits provided	1	—	—	—
„ smoke nuisances abated	36	—	—	18
„ windows provided or repaired	—	129	—	—
„ washing accommodation provided	—	9	—	—
„ food storage and cooking accommo- dation provided	—	44	—	—
„ common staircases repaired	—	23	—	—
„ other nuisances abated or defects remedied	2,153	175	6	54
„ informal notices complied with	1,704	111	—	101
„ drains tested with smoke	800	12	—	7
„ drains tested with chemicals, etc.	971	18	—	14
„ smoke observations taken	162	—	—	80
„ chimneys extended or altered	13	5	—	2
„ insanitary W.C.'s. converted	506	28	—	8

Inspections in connection with Byelaws, etc.	No. of nuisances, contraventions of byelaws, defects, etc.	
	Found.	Remedied.
Bathroom geyser ventilation	93	88
Dirty premises	94	70
Entertainment places	18	15
Rag and bone dealers	10	10
Offensive trades (other than fried fish shops)	14	6
Tents, vans and sheds	24	20
Underground rooms	2	2
Piggeries	3	3
Stables	2	2
Refuse tips	3	3

PROSECUTIONS :—

In respect of nuisances	...	...	3
Closure of polluted well	...	...	1

NOTE—Particulars relating to sanitary inspection with regard to food premises excluded from the above appear on page 67.

Smoke abatement.

During the year 242 observations of smoke were taken and 54 smoke nuisances were abated. In one case (a laundry chimney), the firm concerned, were considering the erection of a new and higher chimney stack so as to minimise the nuisance when approached by the department. Various other means of abating the nuisance of smoke and grit were tried and resulted in a considerable improvement being effected.

Premises and occupations controlled by bye-laws or regulations.

Houses-let-in-lodgings.

Bye-laws are in force in the city which incorporate the provisions of sections 6 and 7 of the Housing Act, 1925. At the end of 1932, 245 properties had been registered under these revised byelaws.

Common lodging houses.

There are 35 common lodging houses in the city, including one belonging to the Corporation, but excluding 6 seamen's lodging houses. The accommodation provided appears to be ample. Keepers and deputy-keepers of common lodging houses are registered annually.

The municipal lodging-house is well patronised and fills a definite need in the city.

MUNICIPAL LODGING HOUSE.

Staff.

Superintendent and matron, Mr. and Mrs. F. G. Manning; porters, 3; domestics, 5; bedmakers, 2; scrubbers (part-time), 1; sewing woman (part-time), 1.

The accommodation in this institution was fully described in the report for 1930. During 1932, 41,546 occupations were recorded, 752 less than in 1931, and a nightly average of 114 lodgers. The house was full on 32 occasions. The charge for each lodger per

night is one shilling or 6/- for a weekly ticket ; baths 3d., and parcel tickets, 2d. extra.

Tents, vans and sheds.

At the present time there are 69 such caravans, etc. in five districts of the city. Of these, 39 are more or less permanent structures, and 30 (used by showmen, etc.) are temporarily stationed in Bristol. These permanent vans, etc., are occupied by 76 adults and 49 children ; and approximately 58 adults and 31 children occupy the temporary structures.

Offensive trades.

Bye-laws are in force which govern scheduled offensive trades in the city.

In addition to fish-frying businesses, there are 45 premises in the city wherein offensive trades are carried on : 162 inspections of these premises were made during the year and 766 inspections of fish-frying businesses.

Annual consents to establish or continue fish-frying.

No. of applications.		Annual consents		No. of applications in abeyance at end of year.	Total No. of consents in force (December, 1932)
In abeyance from previous year.	Received during the year.	Granted	Not granted		
5	15	7	12	1	38

The Health Committee has also issued annual consents in respect of the businesses of tripe-boiling and gut-scraping. An application received during the year for consent to establish a bone-boiling business was refused.

Underground sleeping rooms.

The Council has approved regulations for securing the proper ventilation and lighting of rooms in respect of which section 18 (1) of the Housing Act, 1925, applies, and the protection thereof against dampness, effluvia or exhalation.

Ventilation of bathrooms and bathroom geysers.

One hundred and ninety existing or newly constructed bathrooms were inspected for the purpose of securing the proper ventilation of geysers.

In 93 cases the bye-laws were found to be contravened, and 88 of these were remedied during the year.

Prevention of nuisances arising from the keeping of animals.

Complaints received with regard to the keeping of animals in this city are invariably due to the keeping of fowls and pigeons in small areas, or an excessive number of cats or dogs.

Action by this department was taken in 30 cases.

Places of entertainment.

During the year the inspectors made 159 inspections of cinemas, theatres and other places of entertainments; some of these visits being during a performance.

The methods of heating and ventilating the halls, and the provision of sanitary accommodation were found to be generally satisfactory. It was necessary however, to serve notices or give verbal intimation with regard to insanitary W.C. accommodation or cleansing in 18 instances.

Workshops, etc.

Forty-four notices relating to sanitary defects in factories, workshops, etc., were received during the year from H.M. Inspector of Factories.

Homework—lists of outworkers received during 1932.

	No. of outworkers	
	February	August
Boot and shoe making	21	7
Manufacture of bedding	—	3
Making of wearing apparel	57	117
Particulars received from other authorities	3	2
Total ...	81	129

The lists of outworkers and their addresses are supplied to the town clerk by the various employers. These premises are visited by the district sanitary inspectors during the course of their other duties.

Factory and Workshop Act, 1901.

1.—*Inspection of factories, workshops and workplaces.*

Premises. (1)	Number of		
	Inspections (2)	Written notices (3)	Occupiers prosecuted (4)
Factories (Including factory laundries) ...	154	26	—
Workshops (Including workshop laundries)...	674	23	—
Workplaces (Other than outworkers premises)	93	5	—
Total ...	921	54	—

2.—Defects found in factories, workshops and workplaces.

Particulars (1)	Number of defects			Number of offences in respect to which prosecutions were instituted (5)
	Found (2)	Remedied (3)	Referred to H.M. Inspector (4)	
<i>Nuisances under the Public Health Acts :*</i>				
Want of cleanliness	92	76	—	—
Want of ventilation	16	14	1	—
Overcrowding	—	—	—	—
Want of drainage of floors	3	3	1	—
Other nuisances	69	72	—	—
Sanitary { insufficient	27	25	—	—
accommo- { unsuitable or defective	44	40	1	—
dation { not separate for sexes	7	4	1	—
<i>Offences under the Factory and Workshop Acts :</i>				
Illegal occupation of underground bakehouses (s.101)	—	—	—	—
Other offences	5	3	1	—
(Excluding offences relating to out- work and offences under the sec- tions mentioned in the schedule to the Ministry of Health (Fac- tories and Workshops Transfer of Powers) Order, 1921)				
Total ...	263	237	5	—

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

Outwork in unwholesome premises, Sec. 108.

	*Instances	Notices served	Prosecutions
Making, etc., of wearing apparel	5	5	—
Boot-making	9	9	—
	14	14	—

* Sanitary defects.

Cemeteries.

The existing cemeteries with land held in reserve (a total of 152½ acres, of which 123 acres are in use) will, it is anticipated, provide adequately for the needs of the city for the next 20 years. These cemeteries were reported in detail last year. Four are provided by the local authority (total 93½ acres), two by private companies (53 acres), and two by ecclesiastical bodies (6 acres). The crematorium at Arnos Vale cemetery was opened for use on 10th February, 1928, by the Bristol General Cemetery Company and the first cremation

took place therein on the 2nd March. The total number of cremations yearly have been :

1928	...	...	71
1929	...	...	116
1930	...	...	143
1931	...	...	177
1932	...	...	237

Rag Flock Acts, 1911 and 1918.

Rag flock is used in a few premises in the city. Four samples were taken during the year, analysed by the public analyst, and found to conform to the standard of cleanliness laid down in the regulations.

Schools.

The medical officer of health is also the school medical officer and issues a separate report which deals with the health of the scholars and the sanitation of schools. Forty-six inspections of schools were made during the year by the sanitary staff.

Cleansing and disinfection of verminous persons.

Accommodation is provided at the central disinfecting station, St. Philip's Marsh, for the bathing and disinfection of verminous persons of both sexes, and their belongings. During the year 70 men and 39 women were dealt with compared with 63 men and 26 women in 1931. Children of school age receive attention at the school clinics.

Disinfection of premises and articles.

The staff, equipment and plant at the central disinfecting station is as stated in previous reports. The number of disinfections last year of premises and articles, and articles destroyed, following exposure to infection are given below :—

Premises disinfected	...	...	3,786
Articles	„	...	77,168
Articles destroyed	...	...	3,399

Animal or insect pests.

Mosquitoes.

During September complaints were received from an outlying district of the city regarding persons who had been bitten by mosquitoes. Mosquito larvæ were found in a small stagnant pond, the nearest house being about 100 yards away. As the pond supplied drinking water for horses it was not possible to use larvacide so the surface of the pool was sprayed with paraffin, and lime was sprinkled around the sides of the pond.

Specimens of the mosquitoes were submitted to the British Mosquito Control Institute, and the director (J. F. Marshall, Esq.) identified the specimens as those of the large domestic mosquito, the *obaldia annulata*, a fierce and poisonous biter.

In accordance with Mr. Marshall's advice it was suggested to the tenants that as these adult insects take shelter during the winter months in neighbouring houses, residents in the vicinity of the pond would be well advised to search in cellars, cupboards, attics, etc., for these hibernating mosquitoes and spray the walls and ceilings of such places with a weak disinfectant solution of say 1 in 20 ; and also to keep all windows closed for a couple of hours just before sunset at this period of the year.

Rats and Mice (Destruction) Act, 1919.

The services provided by the Council for the suppression of rats and mice were actively continued by the staff of four ratcatchers employed in the city and port under the direction of the chief sanitary inspector. The figures relating to rats destroyed on ships, quays, wharves, refuse tips., in the vicinity of Avonmouth, Bristol, or Portishead docks will be found in the report of the port medical officer of health. The work carried out in the city during 1932 was as follows :—

	Baits		Traps set.	Total no. of rats destroyed by trapping and fumigation	No. of rats examined at University of Bristol (other than those caught on ships and docks)
	Laid	taken (approximate number)			
Generally in the city	125,210	57,348	2,172	2,231 and 40 mice	47
In public sewers (undertaken by the city engineer's department) ...	51,886	39,371	—	—	—
Total ...	177,096	96,719	2,172	2,231 & 40 mice	47

National Rat Week, 7th—12th November, 1932.

During the week the city engineer caused 17,616 baits to be laid in the city sewers (approximately 13,375 of which were taken) : and in the city 2,780 baits were laid (approximately 1,355 of which were taken) ; and 144 rat traps were set, which resulted in 84 rats being caught.

Leaflets giving information as to the best methods of destroying rats and mice, etc., are available to the general public.

VI.—HOUSING.

Report by A. G. MORISON, M.A., M.D., D.P.H.,
Deputy Medical Officer of Health.

Staff.

Chief housing inspector ... A. W. Griffiths, Cert. B.C. etc., M.S.I.A.
(retired June, 1933)

Housing inspectors, 3; clerks, 3.

Inhabited houses.

The following table indicates the number of dwellings inhabited, void and erected, from 1928 to 1932 :—

Year	Inhabited	Void (estimated)	Erected
1928	83,044	678	1,671
1929	86,125	1,091	1,759
1930	87,618	1,229	1,931
1931	88,807	1,460	1,304
1932	90,924	1,532	2,000

Clearance Orders—Housing Act, 1930.

During the year, six official representations of unhealthy areas were made :

1. Avon Street, St. Philip
2. Flook's Court, St. Jude
3. Wesley Place, St. James
4. St. Augustine's, No. 1.
5. Wellington Road, St. Paul.
6. Little George Street, St. Jude

The Avon Street, Flook's Court, and Wesley Place areas were the subject of Public Local Enquiries on the 18th October, but confirmation of the Orders by the Minister of Health had not been received at the end of the year. The enquiries relating to the other three areas did not take place until March, 1933.

The statistics of these areas are :—

POPULATION.					
No. of adults	M. 203	F. 213	Total	Total	
No. of children	M. 66	F. 53	Persons 535	Families 133	
FAMILIES.					
No. of houses	82	12	4	4	
occupied by	1	2	3	more than 3 families	
RENTS.					
No. of houses at	under 3/-	3/- to 3/6	4/- to 4/6	4/6 to 5/-	
	3	6	12	16	
	5/- to 5/6	5/6 to 6/-	6/- to 6/6	6/6 to 7/-	
	18	19	3	13	
	7/- to 7/6	Over 7/6	Owner/Occupiers		
	9	13	3		
HOUSES.					
No. occupied,	102.	Void, 5.	Total No., 107.		

The following description, which relates to the Avon Street, St. Philip area, may be taken as representative of the conditions in the areas being dealt with by clearance in the city :—

In this area are 45 dwelling houses and two sheds. The extent of the area is .687 of an acre, there being therefore a density of 68.4 buildings to the acre.

The area may be fairly described as an island site bounded by Avon Street, Little Avon Street, Anvil Street and Upper Cheese Lane. Avon Street, on the southwest, being 36 feet wide while Anvil Street, on the northeast, is only 13 feet wide. There is a passageway between Nos. 17 and 19 Avon Street running towards Avon Lane ; this passageway is only 4-ft. 4-ins. wide, and Avon Lane is only 8-ft 6-ins. wide.

The houses in the area are old and worn out beyond patching. This has been recognised by the health department for some years, for no statutory notice has been put on any of the houses since 1920. Notices calling for the abatement of immediate nuisances only having been served, for example the calling of attention to leaking roofs, and broken or otherwise defective water closet pans.

The houses are badly ventilated. Eleven of them have no through ventilation at all ; in 16 of them the first and second floors—that is, the bedrooms,—are without through ventilation, while in six other houses the second floor—that is again bedrooms—are without through ventilation. The stairways are all dark and badly arranged, several of them being entered off the living rooms.

Dampness is pronounced in the houses in the area.

Ten houses in Albert Square, with a population of 58 persons, share one water tap. This tap is situated in the courtyard. In Avon Square there is one washhouse common to 4 houses, with one water tap for them. Thirteen other houses have only an outdoor water supply.

The sanitary arrangements are far below any satisfactory standard. Twenty of the houses have an unflushed water closet, but even in those closets where a flush has been installed the arrangements offend,—in some cases by communicating directly with the scullery, and in other cases by the generally dilapidated condition of the closets ; while there are two water closets in the courtyard of Albert Square accommodating two houses each.

Washing facilities are crude, for the sculleries are in a dilapidated state, badly lit and ventilated, and in general disrepair.

The houses are not adapted for any storage of food, there being no properly ventilated food-cupboard in the area.

Twelve of the houses in Albert Square have only a common courtyard, except in two cases where there is an additional small yard at the rear of the houses—one being 6-ft 4-ins. $\times$ 4-ft. and the other 10-ft $\times$ 7-ft. 10-ins. There are 11 other houses without a yard at all. The yards at the rear of the houses in Upper Cheese Lane are very small. The yard paving of all the houses is broken and the surface drainage is defective so that water is allowed to accumulate.

The houses are mostly built of brick and are in a general state of disrepair. The external walls are plastered with roughcast plastering, which has bulged and fallen away exposing very decayed bricks. The woodwork to doors, floors, windows, stairways, is worn, worm-eaten and dilapidated. The plasterwork to walls is broken and many of the ceilings are cracked and bulged. Generally the premises are in such a state as to require continuous heroic efforts on the part of the tenants to try to keep them reasonably clean and free from dust and dirt.

As one would expect, it is easy to recognise a feeling of general dissatisfaction with the conditions amongst the inhabitants. Several have applied for better accommodation under the Corporation, and some of these applications are supported by certificates from the family doctor.

On the tuberculosis register for the city there are meantime 11 cases of pulmonary tuberculosis from this area. This represents 4.33 per cent. of the inhabitants. The corresponding figure for the whole city is only .93 per cent., that is, pulmonary tuberculosis in this area is 4.6 times more prevalent than in the city as a whole. Quite apart from the cases now on the tuberculosis register there have been nine deaths from pulmonary tuberculosis during the past ten years within this area of a little more than half an acre.

Individual Unfit Houses.

A summary of action taken as regards individual unfit houses, under the powers of the Housing Acts, may be given in the following table :—

1st January, 1928, to 31st December, 1932.					
Action taken.	1928	1929	1930	1931	1932
REPAIRED					
Informal	64	52	75	140	108
After closing orders	25	20	26	36	12
After demolition orders	10	6	17	12	19
After undertakings	—	—	—	—	16
After formal notices	25	38	51	53	48
By Corporation in default of owners after service of formal notices	9	15	9	21	2
Total repaired ...	133	131	178	262	205
Demolished	90	100	112	159	196

Appeals to Ministry of Health.

Against demolition orders, Housing Act, 1925 :

Decision deferred from 1931—one house—order varied to permit use of premises as a store.

Two houses—appeal to utilise as stores—decision pending.

Against demolition order, Housing Act, 1930 :—

One house—appeal withdrawn and house ultimately demolished.

Police Court proceedings.

Prosecution for infringement of section 12 of Housing Act, 1925 :
 Owner fined £10 and occupier ordered to vacate in one month.

Housing Inspection.

Report by A. W. GRIFFITHS, Chief Housing Inspector.

PARTICULARS ASKED FOR IN MINISTRY OF HEALTH CIRCULAR, 1269.

Inspection of dwelling houses.

(1) (a) Total number of dwelling houses inspected for housing defects (under Housing Acts)	552
(b) Number of inspections made for the purpose ...	1,927
(2) (a) Number of dwelling houses (included under sub-head 1 above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	552
(b) Number of inspections made for the purpose ...	1,927
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	405
(4) Number of dwelling houses (exclusive to those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	134

Remedy of defects without service of formal notices.

Number of defective dwelling houses rendered fit in consequence of informal action by the local authority or their officers	108
--	-----

Action under statutory powers.

Proceedings under secs. 17, 18 and 23 Housing Act, 1930.

Number of dwelling houses in respect of which notices were served requiring repairs	38
--	----

Number of dwelling houses which were rendered fit after service of formal notices :—

By owners	38
By local authority in default of owners ...	2

Proceedings under Public Health Acts.

Number of dwelling houses in respect of which notices were served requiring defects to be remedied, verbal notices excluded	1,350
--	-------

Number of dwelling houses in which defects were remedied after service of formal notices :—

	Nuisances, etc.	Private party drains	
		No. of closing	Number of dwelling houses served
By owners	101	6	27
By local authority in default of owners	4	20	142*
	105	26	169

*In some of these cases the local authority relaid the combined drain and private contractors relaid the branch drains, etc.

Proceedings under secs. 19 and 20 Housing Act, 1930.

Number of dwelling houses in respect of which demolition orders were made	180
Number of dwelling houses demolished in pursuance of demolition orders	39

Proceedings under sec. 20 Housing Act, 1930 :—

Number of separate tenements or underground rooms in respect of which closing orders were made ...	4
Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit ...	nil

Proceedings under sec. 3 Housing Act, 1925 :—

Number of dwelling houses in respect of which notices became operative requiring repairs... ..	nil
Number of dwelling houses which were rendered fit after service of formal notices :—	
By owners	2
By local authority in default of owners ...	8
Number of dwelling houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close	nil

Proceedings under secs. 11, 14 and 15, Housing Act, 1925 :—

Number of dwelling houses in respect of which closing orders became operative	nil
Number of dwelling houses in respect of which closing orders were determined, the dwelling houses having been rendered fit	12
Number of dwelling houses in respect of which demolition orders became operative	110
Number of dwelling houses demolished in pursuance of demolition orders	71

VII.—INSPECTION AND SUPERVISION OF FOOD.

Report by J. A. ROBINSON, F.S.I.A., Chief Sanitary Inspector.

Staff.

Meat inspectors, 3; food, drug and dairies inspectors, 4.

Public abattoir.

The council has decided to proceed with the erection of a public abattoir upon a site of approximately three acres situated in the Greenbank district of the city, and plans in connection with this scheme are being prepared.

It is estimated that approximately 90,000 animals are slaughtered annually in the city and that approximately one third of these animals are killed in slaughter-houses which cannot be regarded as satisfactory.

Larvae in chocolate walnuts.

As the result of a communication with another authority, walnuts (shelled) were found to be infected by the larvae of *Ephestia Elutella*.

Mr. Kearns, research entomologist at the University was consulted and after examining a few of the nuts suggested that the nuts be subjected to dry or wet heat for 20 minutes in order to destroy the eggs. This advice was not acceptable to the firm, because they were afraid the nuts would be either partially cooked or (when dried) the brown skin would crack off, in both cases interfering with the appearance of the nuts.

SO₂ on walnuts.

Samples of walnuts were submitted to the public analyst on account of their unsatisfactory appearance and bitter taste: and were reported as having been sprayed with sulphurous acid. The distributors were interviewed and the walnuts were returned to the importers.

Summary of work effected.

Inspections, etc., in connection with :	No. of inspections made	No. of nuisances, contraventions of byelaws, defects, etc.	
		Found	Remedied
PLACES WHERE FOOD, ETC., IS PREPARED, ETC.			
Bakehouses	831	148	141
Cooked meat shops, etc.	124	21	17
Fried fish shops	766	47	42
Ice cream manufacturers and vendors	598	48	45
Restaurants	242	47	45
Street traders	194	16	15
Other food stores	29	8	5
DAIRIES, MILKSHOPS AND COWSHEDS.		Dairies and milkshops.	Cowsheds.
No. of visits during the year		4,290	483
,, notices served		98	2
No. of premises cleansed		53	39
,, premises built, repaired or altered		34	—
,, drains amended		20	1
,, insanitary W.C.'s converted ...		1	—
,, W.C.'s fitted with new pans and traps		9	—
,, W.C.'s fitted with flushing appliances		10	—
,, other defects or insanitary conditions remedied		422	6
SLAUGHTERHOUSES AND MEAT, ETC., PREMISES.			
No. of visits to slaughterhouses			5,904
,, „ wholesale and retail meat markets			1,272
,, „ meat and fish shops			2,661
,, „ cattle markets and railway sidings			66
,, „ fish curing premises			5
,, „ sausage, etc., making premises			67
,, „ cold stores			11
No. of slaughterhouses cleansed			81
,, slaughterhouses rebuilt, repaired or altered			2
,, sanitary defects, etc., remedied in slaughterhouses and other meat premises			7

(a) Milk supply.

Compared with previous years the amount of milk cleansed and pasteurised before delivery to the consumer has increased and is estimated as 47% approximate of the daily supply. The amount of 'bottled' milk retailed is estimated to have been increased to 46% approximate (not including an additional 10% approximate of 'homogenised' milk).

Amount consumed daily :—

Certified milk	21 gallons
Grade A, T.T.	277½ „
Grade A	165 „
Pasteurised	8,657 „
Homogenised	1,759 „

The quantities of certified milk and grade A.T.T. milk total 298½ gallons compared with 251½ in 1931.

During the year 605 samples of milk were taken, an increase of 291 compared with the preceding year.

	Samples
Milk for <i>B. abortus</i> , etc.	31
For tuberculosis examination	303
Repeats „ „	43
Certified milk	25
Grade A (tuberculin tested)	50
Grade A	54
Pasteurised	46
Category and special	21
Test samples at the Institutions	32
Butter, T.B. examination	12
Raw cream	6
	(3 having an excessive count)

The 346 samples of milk examined for tuberculosis were taken from :—

Producers.	No. of specimens.	Tubercle bacilli present in.
City	49	4
Somerset	93	5
Gloucestershire	158	10
Wiltshire	1	—
Dorset	2	—

Milk examined for tubercle bacilli.

Tubercle bacilli were found in 19 or 6.3 per cent. of the 303 samples taken. The farms of the four city producers were visited by the veterinary surgeon and the infected cows removed from the herd and destroyed.

In all of the samples taken for examination for tubercle bacilli, preliminary reports were received, 25 of these reports indicated an excessive amount either of dirt, pus, organisms, etc., in the milk, and these reports were forwarded to the county authorities concerned.

Certified milk.

In accordance with the instruction of the Ministry of Health, 25 samples of certified milk were taken and submitted for examination to the city analyst. Three samples failed to comply with the requirements of the Milk (Special Designations) Order, 1923. Three samples had a bacteria count in excess of the maximum laid down in the order, with *B. Coli* present in 1/10 c.c.

Grade A (tuberculin tested) milk.

Of the 50 samples of grade A (tuberculin tested) milk examined, 15 showed the presence of *B. Coli* in 1/100 c.c. in excess of the requirements of the order and three samples gave an excessive bacteria count with *B. Coli* in excess.

Grade A milk.

Of the 54 samples of grade A milk examined, ten samples failed to comply with the requirements of the order, two had an excessive bacteria count with *B. Coli* present, and eight samples had *B. Coli* in excess.

Pasteurised milk.

Forty-six samples of pasteurised milk were taken and all complied with the requirements of the order.

Other milks.

The city analyst classifies samples of other milks so that :—

Category 1—should satisfy the tests as applied to “certified” milk.

Category 2—should comply with grade A requirements.

Category 3—those samples which fall below category 2.

The 21 samples submitted were placed by the city analyst as follows :—

Category 1	...	8
,, 2	...	3
,, 3	...	10

Licences for graded milks.

The following licences were granted for the production and sale of graded milks in the city during 1932.

Licence.	No. of licences.
For the sale of certified milk	7
Bottling and sale of grade A (tuberculin tested)	6
To sell grade A (tuberculin tested)	20
To produce grade A milk	1
To bottle grade A milk	1
To sell grade A milk	15
Supplementary licences to sell graded milks from premises outside the city	2
To produce pasteurised milk	4
To sell pasteurised milk	1
Total ...	57

Pasteurising plants.

The pasteurising plants used by the four firms that hold licences for the production of pasteurised milk are of the following size and make :—

Firm	Positive holder.	Capacity per hour gallons.
A	Enock's 8 drum	600
B	Silkeborg	350
C	A.P.V.	1,000
D	The Astra	220

Registration.

The numbers of registrations are :—

Cowkeepers	...	...	...	43
Dairymen	...	...	...	370
Milkshops	...	...	...	456

In addition to which there are 142 dairymen retailing milk within the city from outside districts, making a total of 1,011.

Particulars of inspections are given on page 67.

The cowsheds are in a poor condition generally. As a rule, the Company's water is laid on, but there are a few farms on the boundary where the supply is obtained from collected rain water, wells and rhines as no Company's supply is available.

The 370 dairies in the city require constant attention. It is essential that every dairy be provided with a separate room for dairy purposes. In this I can report substantial progress, but the problem of the 456 registered small milkshops still gives rise to much concern.

One method of dealing with these small milkshops which has proved successful in a large number of cases is to insist on the small general shop retailer dealing only in bottled milk.

Many shopkeepers are only allowed to sell milk on the understanding that only unopened bottled milk is sold, thus eliminating some of the most undesirable. The number of shopkeepers in the city who retail homogenised milk is 558, some of which are included in the figure relating to registered milkshops. The registration of the remainder of these shop-keepers is being proceeded with.

The Milk and Dairies Order, 1926.*Legal proceedings.*

Reason	No. of prosecutions.	Result.
Filling a bottle with milk on other than registered premises (sec. 31).	1	Fined 10 shillings

(b) Meat and other foods.

A considerable amount of the fresh meat consumed in the city is slaughtered outside the city boundaries.

The Bristol Corporation Act, 1926 enables the Corporation to insist upon all butchers bringing freshly killed meat into the city from outside districts to submit the meat for inspection by the city inspectors : but this power has not been utilised, pending the provision of a public abattoir. In addition, the city inspectors may visit slaughterhouses situated within a radius of ten miles from the Council House and examine meat in course of delivery, which if found diseased or unsound, may be seized and dealt with as if exposed for sale.

By arrangement with the chief constable, police officers co-operate with health department officials in regard to certain sections of the meat regulations and other matters, and their help has proved most useful and effective.

Legal proceedings in respect of unsound meat, etc.

Reason	No. of prosecutions	Results
Conveyance of inadequately covered meat in vehicles (Public Health (Meat) Regns., 1924, Part VI., Sec. 21)	3	1. Fined 40/- 2. Dismissed on payment of 2/6 costs. 3. Dismissed on payment of 2/6 costs.
Exposing inadequately covered meat for the purpose of sale. Public Health (Meat) Regns. 1924, Part V., Sec. 20	2	1. Dismissed on payment of 20/- costs. 2. Dismissed

During the year eight orders for the destruction of unsound meat were made by the magistrates.

Meat, etc., found diseased, unsound or unfit for human food during the year, 1932 :—

During the year the city meat inspectors caused the under-mentioned amounts of meat, etc., to be destroyed :

	tons.	cwts.	qrs.	lbs.
From slaughter-houses and shops	30	18	1	17
From cold and foreign meat stores	12	3	—	15
Total meat... ..	43	1	2	4
Chitterlings	—	3	—	—
Flour	1	3	2	8
Fish	21	12	2	2
Fruit	—	19	1	20
Gelatine cubes	—	4	—	—
Poultry	—	1	2	21
Tinned goods	—	7	2	12
Vegetables	1	6	1	16
Walnuts	—	3	—	—
Total	69	2	2	27

Entire carcasses were destroyed for the undermentioned reasons :—

	Number of animals.	Totals.
BEASTS, COWS, ETC.		
Dropsical	1	
Emaciated	1	
Tubercular	28	
Unfit	2	32
CALVES.		
Emaciated	2	
Johne's disease	1	
Tubercular	8	
Unfit	1	12
SHEEP.		
Caseous lymphadenitis	2	
Decomposed	1	
Died	1	
Dropsical	31	
Dropsical and emaciated	18	
Emaciated	5	
Inflamed	1	
Jaundice	2	
Lymphadenoma	1	
Peritonitis	2	
Unfit	3	67
PIGS.		
Choked	1	
Died	2	
Dropsical	4	
Emaciated	2	
Erysipelas	10	
Inflamed	1	
Jaundice	3	
Moribund	3	
Nephritis	1	
Peritonitis	6	
Pleurisy	2	
Pleurisy and peritonitis	3	
Pneumonia	1	
Pneumonia and erysipelas	1	
Pneumonia and septicaemia	1	
Pyæmia	11	
Scours	1	
Putrid	1	
Septic injuries	1	
Septic mastitis	1	
Soft and dropsical	1	
Sour flesh	2	
Suffocation	1	
Symtomic anaemia	1	
Tainted	1	
Tuberculosis	30	
Unfit	7	99

Total number of entire carcasses destroyed—210.

PIGS INSPECTED.		
English	32,485	
New Zealand	5,331	
Australian	246	38,062

Slaughterhouses.

Licensed Slaughterhouses, etc.	In December, 1932.
Registered or permanently licensed	41*
Annually licensed	30**
Knackers' yards (annually licensed)	2
Irish animals' landing place belonging to the Bristol Docks Committee	1

* Seven of which are not in use.

** Includes 2 additions to other slaughterhouses.

Particulars relating to the inspection of slaughterhouses and meat premises are given on page 67.

Humane slaughtering.

In 1925 the Council adopted a series of slaughterhouse byelaws which include a modified form of clause 9 (b) of the model byelaws and make the compulsory use of a mechanical instrument for stunning applicable to cattle and calves only. The instrument has also been voluntarily adopted by a number of slaughterhouses in connection with the slaughter of pigs.

Ice cream.

Under the Bristol Corporation Act, 1926, all premises used for the manufacture or sale of ice cream have to be registered with the corporation. Such premises are inspected and registered annually during the summer months (commencing on 1st April,) and during the year 316 were so registered.

Bakehouses.

There are 211 bakehouses in the city. During 1932 the district inspectors paid 831 visits to these premises.

Restaurants.

There are 194 restaurants, dining rooms and luncheon bars in the city, and these are periodically inspected by the district sanitary inspectors. The provisions in the Public Health Act, 1925, regarding protection of foodstuffs, together with the requirements of the Factory and Workshop Act in regard to restaurant kitchens, enable us to procure satisfactory conditions in restaurant kitchens.

Fried fish shops.

The business of fish-frying has been declared an offensive trade and since 1926 the Health Committee has granted annual consents in connection with the establishment of approved new businesses.

The committee has adopted stringent regulations to which new applicants must conform before consent is given to establish a new business. These comprise adequate ventilation of the shop premises painting of the walls and ceilings, the provision of a raised concrete base for the range, a separate cleaning shed with impervious walls and floors, the provision of a glazed stone sink, efficient drainage, and galvanised bins with covers for waste material.

There are 189 fried fish shops in the city, 38 of which are subject to annual consents.

(c) **Adulteration, etc.**

Food and Drugs (Adulteration) Act, 1928.

One thousand, four hundred samples were taken, the proportion of samples per thousand of the estimated population being 3.52.

SAMPLES SUBMITTED TO THE PUBLIC ANALYST, 1932.

Nature of sample.	Number of Samples.		
	Submitted	Reported as genuine	Condemned
Apples	1	1	—
Arrowroot	1	1	—
Baking powder	4	4	—
Beer	4	4	—
Blancmange powder	2	2	—
Brandy	4	4	—
British wines	3	3	—
Butter	131	128	3
Camphorated oil	4	4	—
Cheese	20	20	—
Cider	12	12	—
Cocoa	12	12	—
Coffee	8	8	—
Condensed milk	7	7	—
Cooked meats	4	4	—
Cordials	5	4	1
Cream	9	9	—
Custard powder	4	4	—
Dried fruits	16	16	—
Dripping	8	8	—
Egg substitute	2	2	—
Epsom salts	4	4	—
Eucalyptus oil	2	2	—
Gin	4	2	2
Glauber salts	4	4	—
Glycerine	4	4	—
Golden syrup	7	7	—
Haricot beans	2	2	—
Honey	8	8	—
Ice cream	4	4	—
Jam	12	12	—
Lard	8	8	—
Lime water	5	4	1
Margarine	15	14	1
Milk	847	799	48
Mineral water	9	9	—
Mustard	8	8	—
Olive oil	2	2	—
Pepper	8	8	—
Pickles and sauces	9	9	—
Plain flour	12	12	—
Rice	4	4	—
Rum	6	6	—
Sago	2	2	—
Sausages	18	16	2
Skim-milk	18	17	1
Suet	4	4	—
Sugar	12	12	—
Sweetmeats	18	18	—
Tapioca	3	3	—
Tea	17	17	—
Tincture of iodine	8	7	1
Treacle	1	1	—
Vegetable fat	1	1	—
Vinegar	34	32	2
Walnuts	5	2	3
Whisky	10	9	1
Zinc ointment	4	4	—

This table shows that 66 of these samples were condemned by the public analyst as not genuine.

Legal proceedings were taken in 43 cases, and penalties were imposed as follows :—

£20 (one case).	10/- (six cases).
£5 and 10/- costs (one case).	5/- (two cases).
£5 and 5/- costs (one case).	£2 6s. 0d. costs (two cases).
£5 (one case).	£2 2s. 0d. costs (one case).
£2 (two cases).	20/- costs (one case).
£1 1s. 0d. (two cases).	15/- costs (one case).
£1 (five cases).	5/- costs (one case).
15/- and 5/- costs (two cases).	Pay costs (five cases).

In two cases the defendants were bound over in the sum of £5 ; four cases were dismissed ; two cases were dismissed under warrants ; and one defendant was fined £2 for selling skim-milk from an unlabelled can.

Butter.

All butter factories registered with the local authority were inspected during the year.

Poisons and Pharmacy Act, 1908.

All premises licensed for the sale of poisonous substances for agricultural and horticultural purposes have been inspected, and one licence to sell was not renewed.

Agriculture Produce (Grading and Marking) Act, 1928.

The cold stores, wholesale warehouses and retail premises have been visited in connection with the marking of eggs. Proceedings were taken in one case for offering for sale unmarked preserved eggs and the vendor was ordered to pay 10/- costs. Two samples of eggs supplied to an institution, and another sample obtained from a retailer were submitted to the public analyst as it was suspected that they had been preserved ; but he was unable to confirm this suspicion.

Merchandise Marks Act, 1926.

Although the marking of apples and tomatoes on sale by retail is still unsatisfactory, there is an improvement in the marking of imported eggs. During the year imported butter became subject to marking with an indication of origin, and this requirement has been well complied with ; but the marking required by this order is rather misleading. A fine of 5/- was imposed in a case of foreign tomatoes being sold as British. An instance of removing the mark from imported eggs was discovered and although the police co-operated in endeavouring to secure a conviction the man left the city before action could be taken.

Destructive Insects and Pests Acts, 1877-1907.

Inspections were made during the season with regard to wart disease in potatoes by the inspector of the Ministry and the inspector of the local authority. Six new centres of wart disease were discovered.

Fertilisers and Feeding Stuffs Act, 1926.

During the year 15 samples were collected and submitted to the agricultural analyst, and five samples were outside the permissible limit of variation.

(d) Chemical and bacteriological examination of food.

The city chemical and bacteriological laboratories for the examination of food, situated at 36 Queen Square, are under the direction of Edward Russell, Esq., B.Sc. (Lond.), F.I.C., F.S.C., who issues a separate report containing full particulars of the nature and number of samples submitted for analysis during the year.

Details of work done for this department will be found in the appropriate section of this report.

VIII.—PREVALENCE OF AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

Staff.

Deputy medical officer of health	A. G. Morison, M.A., M.D., D.P.H.
Assistant medical officers	... A. A. Dalby, M.C., M.R.C.S.
"	" " " ... A. F. Alford, M.B., L.R.C.P., Ch.B.
"	" " " ... M. A. O'Donohoe, M.B., Ch.B., B.A.O.
"	" " " ... C. P. Hay, M.B., Ch.B., M.R.C.P.(Ed.), D.P.H.
"	" " " ... G. C. Kelly, B.Sc., M.D., D.P.H.
"	" " " ... A. R. Forbes, M.B., Ch.B., D.P.H.
Home nurses, 3; sanitary inspectors—as detailed under "inspection"; disinfecting staff, 9; clerks, 4.	

The important facts to be noted with regard to infectious disease in the city are the following :—

- (1.) There were 112 fewer cases notified in 1932 than in 1931. The attack rate thus fell by 0.34 per thousand population. This fall is attributed to decrease in the rates for diphtheria from 2.07 to 1.32.
- (2.) 52 per cent. of the infections were of children below the age of 15 years (35 per cent. of school age—5-15 years).
- (3.) 70 per cent. of all notifiable infectious disease excluding tuberculosis were isolated in hospital.
- (4.) The death rate for the principal zymotic diseases, viz. :—enteric fever, smallpox, measles, scarlet fever, whooping cough, diphtheria, and diarrhoea and enteritis, under two years of age was 0.23 per thousand, compared with 0.30 last year.
- (5.) There were no notifications during the year of smallpox, cholera, plague, typhus fever, relapsing fever, or acute polio encephalitis, and the diseases which show decreases in the number of cases were diphtheria (295 less), erysipelas (10 less), enteric fever (10 less), cerebro spinal meningitis (3 less), acute encephalitis lethargica (2 less), puerperal fever (9 less), pulmonary tuberculosis (115 less), tuberculosis of central nervous system (2 less), of vertebral column (2 less), and of bones and joints (2 less).
- (6.) The most notable increase in cases are those recorded for scarlet fever (184 more than last year), and dysentery (85 more), followed by tuberculosis of "other organs" (29 more), ophthalmia neonatorum (18 more), pneumonia (6 more), puerperal pyrexia and poliomyelitis (5 more each), tuberculosis of peritoneum (3 more), while the presence of cases of malaria (4) and continued fever (1), which did not occur last year, have to be recorded.

Tables will be found on pages 78 to 80 giving details of all notifiable diseases by age groups, quarters and districts; also the numbers removed to hospital, and mortality, and in the reports of the medical superintendents of the city hospitals, sanatoria, etc., will be found further observations on the type of disease nursed. Puerperal fever and ophthalmia neonatorum are specially dealt with in the section of this report dealing with maternity and child welfare.

Hospital treatment of notifiable infections.

The following table shows the percentage of cases of notifiable infectious diseases removed to hospital for treatment in 1932.

DISEASE.	No. of cases notified.	Percentage removed to hospital.
Diphtheria (including membranous croup)	533	96
Scarlet fever	637	74
Enteric fever	16	75
Erysipelas	136	51
Acute primary pneumonia ... 290	416	46
Acute influenzal pneumonia ... 126		
Dysentery	128	100
Cerebro-spinal fever	16	100
Poliomyelitis	7	86
Encephalitis lethargica	7	44
Malaria (induced)	4	100
Continued fever	1	—

1932.

Notifications of infectious disease in quarters.

(Port cases excluded).

1931	Disease.	Quarters.				Total	Attack rate per 1,000
		1st.	2nd	3rd.	4th		
...	Small-pox	...	...	...	...	...	...
...	Cholera	...	...	...	...	...	...
...	Plague	...	...	...	...	...	...
828	Diphtheria (including membranous croup) ...	149	69	98	217	533	1.32
146	Erysipelas	29	39	29	39	136	.34
453	Scarlet fever	100	104	105	328	637	1.60
...	Typhus fever	...	...	...	...	...	...
26	Enteric fever	3	4	6	3	16	.04
...	Relapsing fever	...	...	...	...	...	...
...	Continued fever	1	...	...	...	1	.002
19	Cerebro-spinal meningitis...	9	6	1	...	16	.04
2	Poliomyelitis	—	...	6	1	7	.01
289	Acute primary pneumonia	137	44	23	86	290	.72
121	„ influenzal pneumonia	98	18	2	8	126	.33
...	Malaria	1	1	...	2	4	.009
43	Dysentery	1	...	127	...	128	.32
9	Acute encephalitis lethargica	2	...	1	4	7	.01
2	Acute polio encephalitis ...	...	...	—	...	...	...
23	Puerperal fever	6	2	4	2	14	.03
39	Puerperal pyrexia... ..	11	9	12	12	44	.10
22	Ophthalmia neonatorum ...	15	5	9	11	40	.09
567	Pulmonary tuberculosis ...	(17) 123	(14) 134	(8) 106	(14) 89	(53) 452	1.12
15	Tuberculosis of central nervous system	(5) 5	(1) 2	(2) 2	4	(8) 13	.03
21	Tuberculosis of intestines and peritoneum ...	(2) 11	(1) 6	6	(1) 1	(4) 24	.06
15	Tuberculosis of vertebral column	5	3	(1) 4	1	(1) 13	.03
21	Tuberculosis of other bones and joints	2	6	7	4	19	.04
50	Tuberculosis of other organs	19	(1) 16	(2) 17	(4) 27	(7) 79	.20
2,711	TOTAL ...	727 (24)†	468 (17)†	565 (13)†	839 (19)†	2,599 (73)†	6.44

† Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in the totals of notifications).

1932.

Notifications of infectious disease in registration sub-districts
(Port cases excluded).

NOTIFIABLE DISEASES	Total	TOTAL CASES NOTIFIED IN EACH DISTRICT.								Port Cases
		Ashley	Bristol South	Bristol Central	Clifton	St. George	Stapleton	Westbury-on-Trym	Public Insts	
Small-pox	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	1
Diphtheria (including membranous croup)	533	37	72	74	53	109	83	88	17	..
Erysipelas	136	15	35	19	8	30	12	5	12	..
Scarlet fever	637	79	64	49	23	276	101	25	20	..
Typhus fever	..	..	..	..	..	..	..	..	..	..
Enteric fever	16	3	3	1	..	..	..	3	6	1
Relapsing fever	..	..	..	..	..	..	..	..	..	..
Continued fever	1	1	..	..	..	..	..	..	..	..
Cerebro-spinal meningitis	16	3	1	1	1	5	4	1	..	..
Poliomyelitis	7	2	..	..	..	3	2	..	..	..
Acute primary pneumonia	290	44	74	20	38	65	25	16	8	1
„ influenza pneumonia	126	19	27	13	19	22	14	7	5	..
Malaria	4	..	..	..	..	1	..	..	3	6
Dysentery	128	..	..	..	..	..	..	..	128	..
Acute encephalitis lethargica	7	1	1	1	1	2	1	..	..	..
Acute polio encephalitis	..	..	..	..	..	..	..	..	..	..
Puerperal fever	14	2	2	1	..	1	..	..	8	..
Puerperal pyrexia	44	5	7	2	6	5	2	1	16	..
Ophthalmia neonatorum	40	5	8	5	1	12	7	1	1	..
Pulmonary tuberculosis .. (53)	452	49	108	46	29	107	70	17	26	1
Tuberculosis of central nervous systems .. (8)	13	3	2	1	..	4	3	..	..	..
Tuberculosis of intestines and peritoneum .. (4)	24	2	7	5	3	4	2	1	..	..
Tuberculosis of vertebral column (1)	13	2	2	2	..	3	4	..	..	..
Tuberculosis of other bones and joints (7)	19	3	3	2	..	5	3	3	..	..
Tuberculosis of other organs	79	7	30	10	6	14	11	1	..	..
TOTALS .. (73)	2,599	282 (13)	446 (18)	252 (8)	188 (3)	668 (18)	344 (8)	169 (3)	250 (2)	10

* Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

Notifiable Diseases during 1932 (including Port cases).

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.							DEATHS IN WHOLE DISTRICT.						
	At all ages.	At ages—years.						All ages	At ages—years.					
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever	637	5	133	415	54	29	1	468	...	...	2	...	1	...
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	533	6	97	348	51	25	5	512	...	...	11	2	...	...
Enteric fever (including paratyphoid)	17	...	1	6	3	5	2	13	...	...	...	...	...	...
Relapsing fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	14	...	...	...	1	...	...	...	...	...	...	...	...	...
Puerperal pyrexia	44	...	...	...	2	...	...	2	...	...	...	...	...	...
Pneumonia	417	25	49	38	52	99	86	190	...	...	...	...	...	...
Erysipelas	136	10	12	10	11	35	42	69	...	...	5	7	34	61
Cerebro-spinal meningitis	16	2	3	4	2	3	1	16	...	...	...	...	...	...
Poliomyelitis	7	1	3	2	...	1	...	6	...	...	4	2	2	...
Malaria	10	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	128	...	...	...	2	4	4	5	...	...	...	...	...	...
Encephalitis lethargica	7	...	1	...	19	22	28	128	...	...	...	...	...	...
Polio encephalitis	...	...	1	...	3	2	1	3	...	...	1	1	3	...
Ophthalmia neonatorum	40	40	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	2,008	89	300	823	214	268	170	1,415	53	12	16	23	55	65
							144					18		96

Pulmonary Tuberculosis	(53) 453	...	...	...	...	...	...	Pulmonary tuberculosis	1	1	...	4	53	127	97	11
Tuberculosis of the central nervous system	(8) 13	...	...	...	...	...	...	Other tuberculous diseases	7	5	6	2	9	6	4	1
" " intestines and peritoneum	(4) 24	...	...	...	...	...	...		...	...	...	...	...	...	...	...
" " vertebral column	(1) 13	...	...	...	...	...	...		...	...	...	...	...	...	...	...
" " other bones and joints	(—) 19	...	...	...	...	...	...		...	...	...	...	...	...	...	...
" " other organs	(7) 79	...	...	...	...	...	...		...	...	...	...	...	...	...	...
TOTALS	†(73) 601	3	44	86	147	211	98		8	6	6	6	62	133	101	12

†Cases coming to the knowledge of the M.O.H. otherwise than by notification (not included in totals of notifications).

Smallpox.

No case of smallpox was reported in Bristol during the year 1932, and the city has remained free of this disease since two cases of the mild type occurred in 1929. The attack rate for England and Wales was 0.05 per 1,000 population. The medical officers of the department are available for consultation in doubtful cases and I welcome co-operation in this way. During the year nine difficult cases were seen with the doctor in attendance and after consultation with him the following diagnoses were made : seven were cases of chicken pox, one was a case of impetiginous coccal infection, and the remaining patient had dermatitis herpetiformis which often bears a close similarity to the rash of smallpox.

Vaccination.

This work was delegated by the Council to the Health Committee under the Local Government Act 1929, with the additional appointment of the medical officer of health as supervising vaccination officer. Details of the staff transferred were given in my report for 1930.

The following table summarises the work of the vaccination officers for the year up to 31st December, 1932, with comparative figures for the two previous years :—

Year	No. of births	Certificates of primary vaccination.	Statutory declarations.	Certificates of postponement.	Certificates of insusceptibility	Percentage of primary vaccinations.
1932	6,065	2,166	3,131	205	22	36
1931	6,040	1,810	3,083	198	16	30
1930	6,157	1,917	3,027	200	23	31

In addition, 34 re-vaccinations were registered by the vaccination officers. No contacts of cases of smallpox were vaccinated or re-vaccinated under the Public Health (Smallpox) Regulations, 1917.

Diphtheria (including Membranous Group).

Year	No. of cases.				Total	No. of deaths.				Total	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
	Quarters.					Quarters.							
	1	2	3	4		1	2	3	4				
1923	218	115	121	283	737	11	6	7	25	49	191	12	6.6
1924	235	159	122	463	979	24	9	5	25	63	253	16	6.4
1925	412	271	222	223	1,128	28	23	17	6	74	292	19	6.6
1926	231	171	135	174	711	15	8	11	9	43	185	11	6.0
1927	218	140	120	175	653	16	4	4	7	31	169	8	4.7
1928	158	127	118	196	599	3	4	3	7	17	153	4	2.8
1929	201	183	227	521	1,132	17	7	15	23	62	289	16	5.5
1930	600	246	250	388	1,484	24	3	4	10	41	375	10	2.8
1931	271	168	193	196	828	10	5	9	7	31	207	8	3.7
1932	149	69	98	227	533	6	3	6	7	22	132	5	4.1

The decline in the number of diphtheria cases and deaths reported last year continued throughout 1932, when 533 cases and 22 deaths were recorded, representing falls of 295 notifications and nine deaths compared with the previous year. Fewer notifications have not been received during any year since 1920 and the small number of deaths constitutes a record for the city. The case mortality however has again increased from 3.7 per cent. to 4.1 per cent. showing that the type of diphtheria present in the city is much more dangerous than the number of cases might at first suggest.

The case rate per 1,000 population was 1.32 and the death rate 0.05 compared with 2.97 and 0.08 respectively last year. The corresponding rates for England and Wales for 1932 are 1.08 and 0.06 per 1,000 population.

Ninety six per cent. of the cases notified were removed to hospital for treatment, and 65 per cent. of the total cases occurred amongst children of school age ; 19 per cent. amongst children under five years of age ; 91 per cent. of the fatal cases were children under 15 years of age, and 41 per cent. under five years of age.

Diphtheria immunisation.

The most effective weapon in combating the disease is the protection afforded by the safe and efficient method of immunisation in early childhood by means of toxoid.

As stated in my report for 1930 the Health Committee have adopted this method and the course is available free of charge for all children of school age and under. Medical officers of the maternity and child welfare department hold clinics for this purpose for children under five. By arrangement with the Education Committee inoculations are given by the school medical staff at the schools and at their clinics, the Health Committee being responsible for all expense.

The following table shows the number immunised in 1932 at schools and centres (excluding the city isolation hospital at Ham Green) particulars of which are given in the report of the resident medical superintendent).

1931		Education department	M. & C.W. department	Total 1932
3486	No. received full course ...	1,270	347	1,617
2842	Observed after Schick testing	1,188	78	1,266
1669 (58%)	Found negative after observation	470 39.5%	30 38.4%	500 39.4%

In addition 27 children were observed after a second course of immunisation and 24 were negative, making a total of 524 children immunised against diphtheria in 1932.

Thirty children contracted diphtheria in 1932 subsequent to receiving immunising injections, but no significance must be

attached to this figure, as several had not had a full course, and others who had a full course had not been subsequently tested. However, seven cases of diphtheria occurred in children who had been tested and declared negative subsequent to immunisation. The cases were as follows :—

Patient	Age		Preliminary Schick test (date)	Immunizing injections (dates)				Diphtheria onset 1932	Character of disease
	M.	F.		1st	2nd	3rd	Tested & found negative		
42 W.G.	8	...	...	29/ 1/30	12/ 3/31	16/ 4/31	28/ 9/31	6.1	Nasal carrier
571 W.B.	7	...	...	14/ 1/30	4/ 2/30	25/ 2/30	3/ 7/30	9.4	Moderate
784 P.S.	...	8	...	11/12/31	15/ 1/32	12/ 2/32	29/ 9/32	13.6	Nursed at home
1,122 D.S.	...	8½	...	6/ 3/30	27/ 3/30	16/ 4/30	21/10/30	5.9	Moderate
1,464 A.L.	12	...	...	8/ 5/30	29/ 5/30	19/ 6/30	18/11/30	25.10	Moderate
1,503 J.C.	10	...	...	18/ 3/30	7/ 4/30	28/ 4/30	13/10/30	1.11	Carrier
1,663 J.B.	9	...	...	22/ 5/30	20/ 6/30	29/ 8/30	8/12/30	20.11	Moderate

Up to the end of 1932, 5,809 children, ages 1-14 have been immunised and tested negative, and of these seven cases of diphtheria occurred in 1932, equivalent to an incidence rate of 1.2 per thousand compared with 424 cases of diphtheria amongst approximately 86,930 children, ages 1-14 in the city who had not been immunised, giving an incidence rate of 4.8 per thousand.

Supply of diphtheria antitoxin.

The local arrangements under which supplies of diphtheria antitoxin are available to medical practitioners were detailed in my report last year. The scheme, in addition to facilitating the immediate application of antitoxin in diphtheria and providing free issues to patients unable to pay for it, ensures a constant supply of fresh antitoxin at all times.

Erysipelas.

One hundred and thirty-six (136) cases of erysipelas were reported during the year, of which 69 (51 per cent.) were removed to hospital for treatment. Ten deaths occurred including six under two years of age. The case mortality was 7.3 per cent. compared with 6.8 per cent. in 1931.

Scarlet Fever.

Year	No. of cases.				Total	No. of deaths.				Total	Case rate per 100,000	Death rate per 100,000	Fatality (case mortality %)
	Quarters					Quarters							
	1	2	3	4		1	2	3	4				
1923	643	363	199	239	1,444	10	7	2	—	19	374	4.9	1.3
1924	238	151	132	310	831	4	1	—	3	8	215	2.	0.9
1925	336	301	330	527	1,494	12	6	6	5	29	387	7.5	1.9
1926	359	181	199	212	951	6	2	—	1	9	248	2.	0.9
1927	245	297	329	562	1,433	—	—	1	1	2	371	0.5	0.1
1928	332	276	220	383	1,211	—	1	—	2	3	310	0.8	0.25
1929	337	211	202	358	1,108	1	3	2	2	8	283	2.	0.7
1930	281	177	145	208	811	2	—	—	—	2	205	0.5	0.25
1931	127	100	103	123	453	1	—	1	—	2	113	0.5	0.4
1932	100	104	106	328	637	1	—	—	2	3	160	0.7	0.5

The year under review was noteworthy for a marked increase in the number of cases of this disease. Altogether 637 notifications and three deaths were recorded, as against 453 cases and two deaths in 1931. More than half the total cases occurred in the fourth quarter. The figures for 1931 were, however, exceptionally low and had been unapproached in any year since 1919. The number of cases reported in 1932, in spite of the increase, is still roughly half the average annual number (1,206) of the previous thirteen years.

Enteric fever.

Sixteen cases of enteric fever were notified in the city during the year, including eight paratyphoid B. infection. The cases, twelve of which were confirmed bacteriologically, were individualistic in distribution rather than grouped, except in an institution where two cases occurred and no outbreak developed.

The fullest enquiries were made into all cases, but there is no evidence ascribing spread of the disease to any preventable cause.

Continued fever.

One case of continued fever occurred in the Ashley district during the year, in a woman aged 24 years. This is the first case notified in the city since 1920. The cause of the illness was stated to be *bacillus coli* infection with pus and albuminuria in the urine. The case recovered.

Cerebro spinal fever.

During the year, 16 cases of cerebro spinal fever, with 11 deaths, were recorded, against 19 cases and 15 deaths in 1931. Fifteen cases and 10 deaths occurred in the first and second quarters of the year. These figures indicate continued recrudescence of the disease which has showed an increased prevalence in the past two years. Prior to 1931 the average annual number of cases for the previous twelve years was just over five. The last period in which the numbers have approached these figures in recent years was in 1913 and throughout the war period when its prevalence was national rather than local. Twelve of the cases were confirmed bacteriologically. All were isolated cases, there being no instance of more than one case occurring in a house or institution. All cases were removed to hospital for treatment.

Poliomyelitis.

Seven cases of this disease were notified during 1932, and six were removed to hospital for treatment; no deaths occurred. This is an increase of five over the number recorded in 1931. Twenty-seven per cent. of the total cases were children of school age, and 57 per cent. under five years of age.

Encephalitis lethargica.

Seven cases and 11 deaths of this disease were reported during the year, compared with nine cases and three deaths in 1931. From

the history of the cases two of the notifications were chronic cases notified for the first time and five acute. All except one acute case were treated in their own homes.

The age distribution of the cases and deaths were :—

		Cases.	Deaths.
1— 5	...	1	1
5—15	...	—	1
15—25	...	3	1
25—45	...	2	3
45—65	...	1	1
65—	...	—	4
		—	—
		7	11
		—	—

Malaria.

Four cases of malaria were notified in the city during the year. In each case the disease was induced for therapeutic purposes while the patient was an inmate of the Bristol Mental Hospital, and all the patients were afterwards discharged free from malarial infection.

Dysentery.

One hundred and twenty-eight (128) cases and six deaths from this disease were registered in 1932, against 43 cases and three deaths last year. The large increase is due to an outbreak of 127 cases reported below which occurred in the Stapleton Institution in the third quarter of the year. The remaining case was notified from the Bristol Mental Hospital.

Dysentery.—Stapleton Institution.

The infections due to the typhoid and dysentery groups of organisms are notorious for their tendency to appear periodically amongst the inmates of mental hospitals.

At Stapleton Institution in 1918 there were 50 cases of typhoid fever, and the institution has not been entirely free of this disease since. In 1930, there were 22 cases of dysentery, in 1931, 36 cases, and in 1932, 127 cases, and two cases of typhoid occurred.

On 21st August, 1932, the first case of dysentery occurred, and within 48 hours the condition had spread to 10 of the 20 wards, and by 10 days' time, 17 of the wards were affected. All ages were represented amongst the patients attacked, but there was a preponderance of the infirm and elderly, the female proportion being the larger.

All this happened in spite of isolation from the commencement of clinical evidence of intestinal upset, routine attention to food handling, the wearing of rubber gloves by the nurses on attending to patients, and the strict attention to such-like details.

Of the cases, 123 were patients, while the other four were nurses in attendance on these patients, exhibiting for a short period dysentery organisms without any clinical manifestations of illness. I consider these nurses not to have been "carriers" responsible for any cases, but to have been themselves part of the epidemic.

Seven deaths occurred, five being of patients over 70 years of age, and the dysentery infection played little or no contributory part in the cause of death in any case.

Bacteriologically, the first cases seemed due to a *Sonne* infection, but examination of later cases at the laboratories of the Ministry of Health revealed the presence of *Flexner* dysentery bacilli, type z.

Rigid search failed to reveal any of the usual factors acting as a vehicle for the spread of pathogenic germs. The milk supply was considered, the farm visited, illness amongst the workers searched for, and the milk itself examined bacteriologically all with completely negative results. Contamination of the water supply was also excluded.

Of course, such possibilities, on the face of it, seemed to be unlikely explanations of the occurrence, for not one of the resident staff (over 100 in number) were ill, and further, there was no spread of the infection beyond the institution. This limitation of the infection to the patients is very interesting and may be significant.

The institution was suffering from a plague of flies at the time. The patients who succumbed were just those who were unable to protect themselves by the ordinary rules of personal hygiene. There was also one other factor worthy of note.

An investigation of the diet of the inmates of Stapleton revealed a definite deficiency of vitamin content. It may be, then, in the words of a recent report of the Medical Research Council, that "a latent deficiency disease is a real thing, and not an imaginary concept." That is to say, dysentery organisms were present in a state of circumstances where they were likely to win against the human population, this population being unable to protect itself because of its mental and physical make-up, and liable to fall to infection because of vitamin deficiency.

The control of flies about an institution is largely a matter of the control of the disposal of refuse. Recommendations were accepted dealing with refuse disposal, and an incinerator has been installed.

At the request of the Public Assistance Committee the diet was considered in detail, and suggestions were made in due course, bringing the diet up to the standard recommended by the Advisory Committee on Nutrition of the Ministry of Health.

During the epidemic, Stapleton was visited by Dr. Shaw, medical officer of the Ministry of Health and Mr. Nisbet, general inspector, Ministry of Health.

*Pathological and bacteriological examinations.***Infectious disease.**

	Virulent.	Non. Virulent.	Total
DIPHTHERIA—			
Virulence tests	5	13	18
	Positive.	Negative.	Total
Swabs	657	9,173	9,830
TYPHOID FEVER. (Including para- typhoid A, B, & bacillus abortus—			
Agglutination tests ...	13	33	46
Faeces	9	14	23
Urine	—	2	2
DYSENTERY—			
Faeces	—	5	5
Blood	3	1	4
CEREBRO SPINAL FEVER.—			
Swabs	—	11	11
PLAGUE (Port)—			
Pus	—	7	7
TUBERCULOSIS—			
Sputum	154	580	734
ERYSIPELAS—			
Cholesterol content ...	—	—	13

Non-notifiable infectious diseases.

1931		QUARTERS				Total 1932
		1st	2nd	3rd	4th	
	CASES—					
2,772	Measles ...	54	93	65	78	290
17	German measles	2	4	2	6	14
431	Whooping cough	278	950	121	57	1406
88	Mumps ...	130	235	155	659	1179
1,590	Chicken-pox ...	371	458	236	382	1,447
4,898	Total ...	835	1,740	579	1,182	4,336
	DEATHS—					
64	Measles ...	1	1	—	—	2
—	German measles	—	—	—	—	—
5	Whooping cough	9	15	4	3	31
—	Mumps ...	—	—	—	—	—
—	Chicken-pox ...	—	—	—	—	—
69	Total ...	10	16	4	3	33

The only figures available relative to the number of cases of non-notifiable infectious disease which occurred in the city during

1932 are those obtained from school cards and from returns of cases discovered in the homes by nurses and health visitors.

With the exception of whooping cough and mumps, these all show decreased numbers compared with 1931.

Measles.

Two hundred and ninety (290) cases were reported as compared with 2,772 in 1931 and 4,042 in 1930. Similarly the deaths fell from 64 to two (both infants under two years of age).

Broncho-pneumonia was as usual the commonest complication associated with measles and 21 cases suffering from these conditions in homes where the facilities for nursing were inadequate were removed to Ham Green hospital for treatment where one case proved fatal.

Epidemics of measles usually occur in cycles and Bristol has now enjoyed comparative immunity for about 21 months, so that a recrudescence of the disease may be expected during the present year.

German measles.

Fourteen cases of this disease were reported, against 17 in 1931. There were no deaths.

Whooping cough.

Whooping cough was prevalent in the city in 1932, the incidence being greatest during the second quarter when 950 cases occurred out of a total of 1,406 for the year. Altogether 31 deaths occurred, all of them under the age of five years. The corresponding figures for 1931 were 431 cases and five deaths.

During the heavy prevalence of the disease, which began to subside in the third quarter, wards were set aside at Ham Green hospital for the reception of complicated cases from homes without facilities for proper nursing, 47 such cases were admitted to Ham Green hospital where six proved fatal.

Mumps.

This disease also showed a marked increase in the number of cases reported—1,179—(previous year, 88). There were no deaths. The heaviest incidence occurred in the fourth quarter when 659 cases were reported.

Chickenpox.

The case incidence of chickenpox remains practically the same as last year, 1,447 cases being reported against 1,590. The disease as usual was more prevalent in the winter months.

Work of the home nurses.

Three trained nurses are employed to visit homes in connection with infectious diseases. These nurses visit all cases of notifiable and non-notifiable infections, and their duties were described in my report for 1930.

The following table gives the number of cases visited by these nurses during 1932 :—

Scarlet fever	600
Diphtheria	547
Enteric fever	8
Encephalitis lethargica	7
Anterior poliomyelitis	7
Polio encephalitis	—
Cerebro-spinal fever	17
Malaria	—
Dysentery	—
Erysipelas	125
Measles	284
Whooping cough	1,430
Chicken pox	1,491
Mumps	1,163
German measles	6
Total cases	5,685

Forty-five enquiries regarding infectious disease were also made by district sanitary inspectors.

Influenza and respiratory diseases (excluding pulmonary tuberculosis).

Deaths at ages and in quarters.

	1927	1928	1929	1931	Deaths.	Under 1	1-5	5-15	15-25	25-45	45-65	65- Total 1932	Quarters			
													1st	2nd	3rd	4th
245	56	251	120	...	Influenza	4	4	2	7	19	38	80	114	22	2	16
280	173	226	206	...	Bronchitis	8	1	—	—	7	31	138	104	28	23	30
370	285	369	278	...	Pneumonia	46	17	5	7	34	61	86	116	48	32	60
59	39	61	50	...	Other respiratory diseases	1	1	—	—	4	12	52	33	15	6	70
954	553	907	654	...	Total	59	23	7	14	64	142	356	367	113	63	122
339	395	387	289	...	NOTIFICATIONS Primary pneumonia	21	44	31	36	71	54	33	137	44	23	86
284	76	255	121	...	Influenzal pneumonia	4	5	7	15	28	32	35	98	18	22	8
623	471	642	410	...	TOTAL	25	49	38	51	99	86	68	235	62	25	94

The group of diseases included in the table above again contributed largely to the death rate, the number of deaths from these diseases representing 14.3 per cent. or roughly one in seven of all deaths, compared with 13.82 per cent. in 1931.

There was a mild epidemic of influenza in the first quarter of the year and this increased the figures for these diseases for 1932. The cold weather experienced in the early months of the year caused a sharp rise in the incidence of respiratory deaths and pneumonia notifications, and it became necessary to set aside wards at Ham Green hospital for the treatment of cases where the home facilities for nursing were inadequate. Twenty-eight such cases were removed to hospital, of which three proved fatal.

As usual, the mortality from respiratory diseases was mainly amongst middle aged and elderly people—75 per cent. of the total deaths were of persons over 45 years of age. This ratio is less marked in pneumonia, the number of deaths in this age group falling to 57 per cent. mainly because of large number amongst infants under five years which accounted for 25 per cent. of the total pneumonia deaths.

Cancer.

**Deaths, death-rates and percentage in age groups.*

	1932	Age Groups.					
			—15	—25	—45	—65	+65
No of deaths ...	620	Male ...	1	—	13	220	53
Death rate per 1,000 popula- tion	1.54	Female	2	1	38	237	55
		% ...	0.5	0.2	8.2	73.7	17.3

* Registrar General's figures.

Cancer caused 620 deaths in Bristol last year, an increase of 23 over the number recorded in 1931 : 333 amongst females and 287 amongst males. This year the increase is greater amongst males (15) than females (7).

For 1932 the death rate was 1.54 per 1,000 population, compared with 1.49 last year.

Heart disease.

Deaths, death-rates and percentage of age groups.

	1928	1929	1930	1931	1932	Age Groups, 1932.			
						—15	—45	—65	+65
No. of deaths	852	1,018	878	996	1,060	.4	64	227	76.5
Death rate per 1,000 popula- tion ...	2.18	2.61	2.25	2.49	2.62	.4	6.0	21.4	72.2

There were 1,060 deaths certified from heart disease during 1932, an increase of 64 over the number recorded last year, and more

deaths were attributed to this disease than any other in the list of specified causes of death. Approximately one in four of the total deaths were ascribed to it, and the death rate was 2.62 per 1,000 compared with 2.49 in 1931.

The increase in heart deaths is closely associated with the high mortality from respiratory disease, previously referred to, by reason of the fact that in the classification of deaths, heart disease takes precedence over respiratory diseases other than influenza and pulmonary tuberculosis. Many deaths resulted from cardiac complications of respiratory diseases or *vice versa*, and in such cases the deaths would be classified under heart disease. This must be borne in mind when considering deaths from heart disease.

No less than 72 per cent. of the deaths classified to heart disease occurred amongst aged people over 65 years, and 21 per cent. between 45 and 65 years.

TUBERCULOSIS.

City of	Per 1,000 population all causes	
	Case rate	Death rate
Birmingham	1.50	.94
Liverpool	3.24	1.32
Manchester	1.93	1.17
Sheffield	3.384	.817
Leeds	1.52	1.02
Bristol	1.67	.83
Bradford	1.46	.93
West Ham	2.0	1.1
Nottingham	1.24	0.93
Portsmouth	.95	1.00
Cardiff	1.89	1.26
Plymouth	1.64	.92

The total number of names on the tuberculosis register on December 31st, 1932, was 4,153 compared with 4,856 on the same date in 1931, a decrease of 703.

During 1932, 674 fresh cases of tuberculosis came to the knowledge of the department compared with 765 in 1931. Of these, 601 were duly notified under the regulations and 506 (nearly 75 per cent.) were pulmonary cases. No cases of wilful neglect or refusal to notify came to the notice of the department. The number of cases notified in Bristol has been steadily falling since 1918. During the past four years the average annual number notified is less than half the number registered in the war years, viz. :—

Average	Pulmonary Tuberculosis.	Other forms of Tuberculosis.
1914/1918 ...	1,238	307
1929/1932 ...	539	133

The number of deaths from all forms of tuberculosis fell from 406 in 1931 to 334 in 1932, a drop of 72. The death rate was .83

per 1,000, of which respiratory tuberculosis was responsible for .73, the corresponding figures for 1931 being 1.02 and 0.90 per 1,000. The proportion of deaths per 1,000 cases was 49 ; in the case of pulmonary tuberculosis the proportion is higher, being 58 per cent. of the total deaths from tuberculosis.

The ratio of non-notified tuberculosis deaths to total tuberculosis deaths compared with 1931 is seen below.

	Males.		Females.	
	1932	1931	1932	1931
Pulmonary ...	1 in 12.7	1 in 14.6	1 in 14.5	1 in 12.8
Non-pulmonary	1 in 3.1	1 in 1.8	1 in 2.6	1 in 2.1

During the year 733 cases were admitted to sanatoria for in-patient treatment and 3,053 patients were treated at the dispensaries the corresponding figures for 1931 being 786 sanatoria admissions and 3,209 dispensary patients. Fifty-six grants of milk (one quart per day) were made to tuberculous patients on the recommendation of the tuberculosis officer.

Public Health (Prevention of Tuberculosis) Regulations, 1925.

Under these regulations any person suffering from tuberculosis of the respiratory tract, and in an infectious state, shall not enter upon any employment or occupation in connection with a dairy, which would involve the milking of cows, treatment of milk, or the handling of vessels used for the containing of milk, and the Council may call upon such person to discontinue his employment.

No case requiring action under these regulations came to the notice of the department during the year.

Public Health Act, 1925. Section 62.

Under this Act an order may be made by a court of summary jurisdiction for the removal to hospital of any person suffering from pulmonary tuberculosis in an infectious state, where it can be proved that the accommodation provided for such person is such that proper precautions to prevent the spread of infection cannot be taken, or that such precautions are not being taken, and that serious risk of infection is thereby caused to other persons.

The necessity of applying to a court for an order under this Act did not arise during the year.

The tables which follow give particulars by age groups of all new cases and deaths from tuberculosis in the area (including port cases) during 1932 and by annual totals for the years 1922-1932; deaths classified according to occupations; sanatoria admissions and discharges ; and the extent of residential treatment during the year. In addition there is the report of the tuberculosis officer which details in tabular form full particulars of the work performed at the dispensaries and in the homes by the staff employed in this section, including returns showing the number of cases examined and treated and the immediate results of treatment of patients discharged from residential institutions during the year.

New cases and mortality during 1932.

Age periods	New cases				Deaths			
	pulmonary		non-pulmonary		pulmonary		non-pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0	2	—	4	4	1	—	4	3
1	4	2	24	18	1	—	6	5
5	12	12	17	13	1	—	—	1
10	12	10	9	10	3	—	1	—
15	27	23	5	9	7	9	4	2
20	33	46	8	6	22	15	—	2
25	65	67	9	10	41	33	2	3
35	41	34	1	7	29	24	1	1
45	34	18	5	4	33	18	1	2
55	35	14	—	2	32	14	—	1
65 and upwards	9	6	2	1	8	3	—	1
Totals ...	274	232	84	84	178	116	19	21
Ratio of non-notified deaths				1-12.7	1-14.5	1-3.1	1-2.6	

NOTIFICATIONS AND DEATHS FROM PULMONARY AND OTHER FORMS OF TUBERCULOSIS, 1922-1932.

Year	Cases, Deaths, with attack and death rate per 1,000	Pulmonary tuberculosis	Other forms of tuberculosis
1922	Notifications etc. ... Deaths	824 (2.14) 403 (1.04)	245 (0.63) 97 (0.25)
1923	Notifications, etc. ... Deaths	846 (2.19) 367 (0.95)	222 (0.57) 98 (0.25)
1924	Notifications, etc. ... Deaths	797 (2.06) 364 (0.94)	203 (0.52) 73 (0.18)
1925	Notifications, etc. ... Deaths	742 (1.92) 367 (0.95)	173 (0.44) 98 (0.25)
1926	Notifications, etc. ... Deaths	754 (1.94) 374 (0.97)	195 (0.50) 60 (0.15)
1927	Notifications, etc. ... Deaths	783 (2.28) 397 (1.03)	180 (0.46) 67 (0.17)
1928	Notifications, etc. ... Deaths	704 (1.80) 338 (0.86)	177 (0.45) 51 (0.13)
1929	Notifications, etc. ... Deaths	620 (1.58) 402 (1.02)	177 (0.45) 63 (0.16)
1930	Notifications, etc. ... Deaths	610 (1.55) 396 (1.01)	106 (0.27) 57 (0.14)
1931	Notifications, etc. ... Deaths	613 (1.53) 358 (0.89)	152 (0.38) 48 (0.12)
1932	Notifications, etc. ... Deaths	506 (1.25) 294 (0.73)	168 (0.42) 40 (0.10)

DEATHS FROM ALL FORMS OF TUBERCULOSIS OCCURRING IN 1932
CLASSIFIED ACCORDING TO OCCUPATION.

Occupation	Deaths	
	Number	Percentage of total deaths
House workers	86	25.74
Labourers ...	43	12.87
No occupation...	37	11.07
Outdoor workers	27	8.08
Various ...	19	5.68
Infants ...	16	4.79
Clerks, typists, etc.	13	3.89
Food trades, etc.	13	3.89
Leather workers	11	3.29
Metal workers ...	11	3.29
Printers ...	11	2.29
School age ...	9	2.69
Tobacco workers	7	2.09
Textile workers	6	1.76
Wood workers	6	1.76
Other dusty trades	5	1.49
Shop assistants	5	1.49
Seamen ...	5	1.49
Teachers ...	3	0.89
Nurses ...	1	0.29
Total ...	334	100.0

Sanatoria available for in-patient treatment, 1932.

	No. of Beds	ADMITTED.			DISCHARGED OR TRANSFERRED.			DIED.		
		M	F.	T.	M.	F.	T.	M.	F.	T.
PULMONARY—EARLY CASES.										
Winsley Sanatorium, nr. Bath	58	74	81	155	80	79	159	1	1	2
*Ham Green Sanatorium, Pill, near Bristol	72	90	66	156						
PULMONARY AND NON-PULMONARY—ADVANCED CASES.										
*Ham Green Sanatorium	64	75	69	144	119	92	211	52	27	79
*Southmead Hospital	68	81	65	146	53	50	103	29	14	43
PULMONARY AND NON-PULMONARY—CHILDREN (under 16).										
*Fenchay Park Sanatorium, Fenchay, nr. Bristol	100	64	55	119	64	47	111	2	..	2
NON-PULMONARY CASES.										
Cossham Hospital, Kingswood, Bristol	9	3	9	12	4	11	15	1	1	2
Lord Mayor Treloar Cripples' Hospital, Alton	..	..	..	..	1	..	1	..	..	..
Winford Orthopaedic Hospital, nr. Bristol	..	..	..	..	9	9	18†	..	..	..
† Transferred to Fenchay Park Sanatorium										
TOTALS		387	345	732	330	288	618	85	43	128

During the year the following cases were also admitted to and discharged from various outside institutions :

	ADMITTED.			DISCHARGED OR TRANSFERRED.			DIED.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
PULMONARY.									
Nordrach-upon-Mendip Sanatorium	..	1	1	..	1	1	..	..	..
NON-PULMONARY.									
North Devon Convalescent Children's Home	..	..	..	..	1	1	..	..	..
TOTALS	..	1	1	..	2	2	..	..	..
GRAND TOTALS	387	346	733	330	290	620	85	43	128

* Institution belonging to the Council.

Return showing the extent of residential treatment and observation during the year in institutions (other than poor law institutions) approved for the treatment of tuberculosis.

			In institutions on Jan. 1.	Admitted during the year.	Discharged during the year.	Died in the insti- tutions.	In institutions on Dec. 31.
Number of doubtfully tuberculous cases admit- ted for observation	Adults	M.	...	11	10	...	1
		F.	2	9	10	...	1
	Chil- dren		4	44	42	1	5
	Total		6	64	62	1	7
Number of definitely tuberculous patients admitted for treatment	Adults	M.	133	312	237	83	125
		F.	88	273	218	42	101
	Chil- dren		123	68	85	2	104
	Total		344	653	540	127	330
GRAND TOTAL ...			350	717	602	128	337

Tuberculosis Dispensaries.

Report by C. J. CAMPBELL FAILL, F.R.C.P., Ed.,
Tuberculosis Officer.

Staff.

Tuberculosis officer ... C. J. Campbell Faill, F.R.C.P., Ed.

Assistant tuberculosis officer J. Scott Currie, M.B., Ch.B.

Dispensary clinic nurses, 3; laboratory assistant and X-ray operator, 1; dispenser (part-time), 1; clerks, 6.

Situation of dispensaries—

19 Portland Square, and 4 Redcliffe Parade West.

Summary for year 1932.

Three thousand and fifty-three (3,053) old and new patients were examined at the dispensaries during the year. The following summary shows the initial treatment recommended for these cases :

				New patients	Old patients
Sanatorium treatment ...	...	...	...	414	274
Dispensary treatment ...	...	...	...	12	214
Supervision and observation ...	...	...	...	102	568
Light treatment ...	...	...	...	15	27
Domiciliary treatment ...	...	...	...	35	205
No treatment required ...	...	...	...	843	344
Total ...				1,421	1,632

Total number of examinations	...	...	...	...	4,882
Total attendances of school children	...	...	...	...	3,993
Total injections	...	...	...	...	491
Artificial pneumothorax	...	...	...	...	340
No. of visits to patients by tuberculosis nurses and health visitors	...	...	...	...	7,786
No. of cases seen by consulting surgeon	...	...	...	...	144
No. of attendances of cases seen by consulting surgeon...	...	...	...	...	229
No. of cases seen by ear, nose and throat surgeon	...	...	...	...	86
No. of attendances of cases seen by ear, nose and throat surgeon	...	...	...	...	150
No. of attendances for ultra-violet light treatment	...	...	...	...	2,061

One thousand and thirty (1,030) children of school age were examined during the year. Of these, 577 were old cases attending for re-examination and 453 were new cases. Of the latter, 12.8 per cent. were diagnosed as definite cases of tuberculosis, 1.3 per cent. as suspects, and 85.8 per cent. as non-tuberculous. The total number of examinations of schoolchildren was 1,418.

There was an increase of 40 per cent. in the number of consultations with medical practitioners during the year.

Of the total deaths in the city from all forms of tuberculosis, 37 per cent. occurred in sanatoria or hospital beds controlled by the public health authority.

Open-air shelters are loaned to patients where suitable conditions exist. There are at present 10 shelters in use which are subject to periodical inspection.

Patients who have been treated with *Crisalbine* at sanatorium are having additional courses in the dispensary where it is considered necessary. The numbers treated in this manner do not justify a criticism of the treatment in the meantime.

The voluntary After-Care Committee which has been in existence for ten years, continues to make a valuable contribution to the welfare of consumptives. It has to function and use its influence in many directions. Some patients require assistance in the way of clothing before going to sanatorium, whilst in others there is the difficult problem of a patient urgently in need of sanatorium treatment, but unable to pay the rent of their home during the time they are away, and would as a consequence be faced with the position of having no home to return to. In such circumstances the rent is paid and the patient is able to go away.

To be effective, after-care work must be carried out in co-operation with the tuberculosis dispensary, because the medical and economic position of the patient require consideration.

Perhaps the greatest problem with regard to after-care in connection with tuberculosis lies in the condition of the patient who has been discharged from sanatorium with the disease quiescent or arrested. There is the economic as well as the medical problem, how to obtain suitable work at a wage sufficient to maintain the patient in health. Some scheme embracing occupational treatment is essential if this problem is to be met.

The experience gained by the small workshop scheme employing two or three tuberculous patients in various types of woodwork which has been running at Portland Square Dispensary since 1927, has been such as to justify the claim for a scheme that will at least make some effort towards this social problem; the rehabilitation of the consumptive. With this object in view, the After-Care Committee is putting into operation a workshop scheme at Southmead on a much larger basis. The buildings are at present in course of erection.

Return showing the work of the Dispensaries during the year 1932.

DIAGNOSIS	PULMONARY.				NON-PULMONARY.				TOTAL.				GRAND TOTAL.	
	adults		children		adults		children		adults		children			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts) :														
(a) Definitely tuberculous	189	151	22	14	18	22	22	20	207	173	44	34	458	
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	3	6	4	5	18	
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	107	118	143	88	456	
B.—CONTACTS examined during the year :—														
(a) Definitely tuberculous	6	5	4	2	..	..	..	1	6	5	4	3	18	
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	..	..	1	2	3	
(c) Non-tuberculous ..	..	..	..	..	..	..	..	..	69	123	136	135	468	
C.—CASES written off the dispensary register as :—														
(a) Recovered	148	183	9	3	7	3	3	5	155	186	12	8	361	
(b) Non-tuberculous ..	..	..	..	..	..	..	..	..	185	261	300	239	935	
D.—NUMBER OF CASES on dispensary register on December 31st :—														
(a) Definitely tuberculous	1089	1030	219	145	137	162	268	212	1226	1192	487	357	3262	
(b) Diagnosis not completed	..	..	..	..	..	..	..	..	4	7	8	10	29	

1. Number of cases on Dispensary Register on January 1st ..	3,410	2. Number of cases transferred from other areas and cases returned after discharge under head 3 in previous years	193
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of" ..	110	4. Cases written off as dead during the year (all causes)	277
5. Number of attendances at the Dispensaries (including contacts) ..	12,156	6. Number of Insured Persons under domiciliary treatment on 31st December	242
7. Number of consultations with medical practitioners : (a) Personal 40 (b) Other 1,648		8. Number of visits by tuberculosis officers to homes (including personal consultations) ..	307
9. Number of visits by nurses or health visitors to homes for dispensary purposes	*7,786	10. Number of : (a) Specimens of sputum, etc., examined 1,068 (b) X-ray examinations made in connection with dispensary work 1,760	
11. Number of "recovered" cases restored to dispensary register and included in A (a) and A (b) above	3	12. Number of "T.B. plus" cases on dispensary register on December 31st	731

* Including Public Health (Tuberculosis) visits.

Return showing the immediate results of treatment of definitely tuberculous patients discharged from residential institutions during the year 1932.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of residential treatment in the institution.															Grand Totals
			Under 3 months			3—6 months.			6—12 months.			More than 12 months			Totals			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent	22	23	5	27	29	15	12	6	13	3	4	7	64	62	40	166
		Not Quiescent ..	6	12	1	2	9	1	3	1	..	1	1	3	12	23	5	40
		Died in institution	5	2	1	..	..	..	..	..	..	..	..	..	5	2	1	8
	Class T.B. plus group 1.	Quiescent	1	2	..	..	3	..	1	..	1	..	..	..	2	5	1	8
		Not Quiescent ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Class T.B. plus group 2.	Quiescent	10	2	..	8	11	1	6	2	..	1	..	..	25	15	1	41
		Not Quiescent ..	4	..	..	2	8	..	1	1	..	..	..	..	7	9	..	16
		Died in institution	..	..	..	..	..	..	2	2	..	2	..	..	4	2	..	6
	Class T.B. plus group 3.	Quiescent	5	..	..	20	12	..	13	3	..	2	..	..	40	15	..	55
		Not Quiescent ..	29	22	..	19	24	..	12	14	..	5	3	..	65	63	..	128
		Died in institution	46	26	..	10	5	..	9	3	..	4	1	..	69	35	..	104
NON-PULMONARY TUBERCULOSIS	Bones and joints.	Quiescent	4	5	..	3	4	2	4	3	2	2	1	5	13	13	9	35
		Not Quiescent ..	..	..	1	2	1	..	..	..	1	..	1	..	2	2	2	6
		Died in institution	1	1	..	1	..	..	1	..	..	2	..	..	5	1	..	6
	Abdominal	Quiescent	1	..	2	..	2	7	2	..	3	..	1	2	3	3	14	20
		Not Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in institution	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	2
	Other organs	Quiescent	1	5	1	..	1	..	..	..	2	..	..	1	1	6	4	11
		Not Quiescent ..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
		Died in institution	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
	Peripheral glands	Quiescent	1	..	..	1	1	4	..	..	4	..	..	..	2	1	8	11
		Not Quiescent ..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Return showing the results of observation of doubtfully tuberculous cases discharged from residential institutions during the year 1932.

Diagnosis on discharge from observation.	Pulmonary Tuberculosis						Non-Pulmonary Tuberculosis						Totals.		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	2	...	...	...	...	...	...	...	...	...	...	1	2	...	1
Non-tuberculous	1	...	...	6	5	*19	...	...	4	1	4	12	8	9	35
Doubtful	...	...	...	...	1	4	...	...	...	...	...	3	...	1	7
Totals	3	...	...	6	6	23	...	...	4	1	4	16	10	10	43

* One case died — septic pneumonia

Report on Artificial Light Treatment.

Types of lamps used :—

Ajax Tungsten Arc—5 amps.

Hewettic Quartz Mercury Vapour—7 amps.

Hanovia Quartz Lamp—2.5 amps.

Direct Current—250 volts.

RESULTS OF ARTIFICIAL LIGHT TREATMENT.

Disease.	Under treatment end of 1931	New cases	Discharged				Ceased to attend	Under treatment end of 1932
			Quiescent	Much improved.	Improved.	Stationary.		
Bones and joints (sinus) ...	2	6	3	1	—	—	—	4
Adenitis (sinus)	3	7	1	—	3	—	—	6
„ (no sinus)	1	9	3	1	3	—	—	3
Peritonitis ...	7	12	10	—	3	1	—	5
Lupus	2	4	—	—	2	—	—	4
Septic dermatitis	—	2	—	—	1	—	1	—
Ischio-rectal abscess (+ Pulm. tuberculosis) ...	—	3	1	—	1	—	—	1
Larynx	1	6	—	—	2	3	—	2
Total ...	16	49	18	2	15	4	1	25

As will be seen from the above table, a small number of patients suffering from surgical tuberculosis have been treated with ultra-violet light. Of the total number of cases completing treatment, 87.5 per cent. have improved as a result of this treatment.

The average duration of treatment has been :—

Bones and joints	...	...	6 months.
Adenitis	...	...	6—9 months.
Peritonitis	...	...	6—9 months.

The average gain in weight of “ quiescent ” cases is 5 lbs.

VENEREAL DISEASES.

There has been no change in the local arrangements for the treatment of venereal disease, as set forth in my report for 1930. The medical director's report on the work of the treatment centre at the Bristol Royal Infirmary during 1932 which follows, gives full particulars of the numbers, types, treatment, pathological examinations and attendances from each area. Twenty-five medical practitioners in the city are recognised for the purpose of obtaining free of charge from the Corporation approved substitutes for salvarsan and 533 specimens were submitted by private practitioners for examination at the University laboratory. Fifty-four meetings were addressed during the year by members of the panel of lecturers kept by the medical officer of health.

Venereal Disease Clinic.

Report by S. HARDY KINGSTON, M.B., Ch. B., D.P.H.,
Medical Director.

Staff.

Medical director	...	...	S. Hardy Kingston, M.B., Ch.B., D.P.H.
Assistant medical officers	{		
			W. A. Jackman, M.B., Ch.B., F.R.C.S. (Ed.)
Sister, 1; nurses, 4; domestic staff, 3; orderlies, 2.			

Number of new patients.

The number of new patients for the year was 1,075. This shows a decrease of 34 on the previous year. The number of non-venereal cases is due chiefly to the system of examination whenever possible in any cases of venereal disease of the members of the family, a large proportion of whom are found to be free from venereal disease. New patients are as follows:—syphilis, 239; soft chancre, 3; gonorrhoea, 419; non-venereal, 414.

Number of patients.

The total number of patients treated during the year was 2,574, being a decrease of 813 on the previous year.

Attendances.

The total attendance for the year was 50,519, an increase of 4,636 on the previous year's working.

Venereal Disease Clinic.

Pathological Examinations.

1932		MICROSCOPICAL			SERUM TESTS		
		for spirochetes	for gonococci	Wassermann	Others for syphilis	for Gonorrhoea	
Examinations of pathological material :—							
(a)	Specimens which were examined at, and by the medical officer of, the treatment centre ..	38	—	—	—	—	—
(b)	Specimens from persons attending at the treatment centres which were sent for examination to an approved laboratory	—	1,794	1,736	35	164	164

No. of attendances from each area.

Name of county or county borough	Bristol	Gloucestershire	Somerset	Wiltshire	Glamorgan-shire	Monmouth-shire	Bath	Birmingham	Glasgow	Newport	Salop	Swansea	Other Counties	Total
A. Number of cases from each area dealt with during the year <i>for the first time</i> and found to be suffering from : Syphilis Soft chancre Gonorrhoea Conditions other than venereal TOTAL	197 3 350 375 925	13 15 13 41	16 24 14 54	 1 3	1 .. 2 2 5	 1 .. 1	 1 2 3	 3 .. 3	 1 1 2	3 .. 1 .. 4	 1 .. 1	1 1	8 18 6 32	239 3 419 414 1,075
B. Total number of attendances of all patients residing in each area	48,811	601	853	22	20	2	29	10	8	19	11	29	104	50,519
C. Aggregate number of "in-patient days" of all patients residing in each area	2,705	310	292	..	10	11	..	..	18	19	6	185	..	3,556
D. Number of doses of arsenobenzol compounds given in the Out-patient clinic and the In-patient department to patients residing in each area	4,415	148	229	..	7	1	5	1	2	8	1	2	21	4,839

Statement showing the services rendered at the treatment centre
during the year 1932.

	Syphilis		Soft Chancres		Gonorrhoea		Conditions other than Venereal		TOTALS	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of cases on 1st January under treatment or observation	723	265	..	..	380	85	..	..	1,103	350
2. Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection ..	6	4	..	..	34	2	..	..	40	6
3. Number of cases dealt with for the first time during the year under report (exclusive of cases under item 4) suffering from :—										
Syphilis, primary	64	13	..	..	..	..	..	..	64	13
" secondary	4	7	..	..	..	..	..	..	4	7
" latent in 1st year of infection	1	..	..	..	..	..	..	..	1	..
" all later stages	66	34	..	..	..	..	..	..	66	34
" congenital	10	25	..	..	..	..	..	..	10	25
Soft Chancres	..	..	1	..	323	41	..	..	1	..
Gonorrhoea, 1st year of infection	..	..	..	..	20	8	..	..	323	41
later	..	..	..	..	..	..	..	..	20	8
Conditions other than venereal	..	..	..	..	..	..	339	75	339	75
4. Number of cases dealt with for the first time during the year under report known to have received treatment at other Centres for the same infection	15	..	2	..	24	3	..	..	41	3
TOTALS OF ITEMS 1, 2, 3 AND 4 ..	889	348	3	..	781	139	339	75	2,012	562
5. Number of cases discharged after completion of treatment and final tests of cure	13	7	..	..	133	31	339	75	535	113
6. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—										
Syphilis, primary	83	1	..	..	..	..	..	..	83	1
" secondary	6	9	..	..	..	..	..	..	6	9
" latent in 1st year of infection	5	..	..	..	..	..	..	..	5	..
" all later stages	48	30	..	..	..	..	..	..	48	30
" congenital	2	7	..	..	..	..	..	..	2	7
Soft Chancres	..	..	1	..	215	10	..	..	1	..
Gonorrhoea, 1st year of infection	..	..	..	..	34	5	..	..	15	10
later	..	..	..	..	..	..	..	..	34	5
Number of cases which ceased to attend after completion of treatment but before final tests of cure	36	6	..	..	58	2	..	..	94	8
8. Number of cases transferred to other centres or to institutions, or to care of private practitioners	102	8	2	..	168	4	..	..	272	12
9. Number of cases remaining under treatment or observation on 31st December	594	280	..	..	123	87	..	..	717	367
TOTALS OF ITEMS 5, 6, 7, 8 AND 9 ..	889	348	3	..	781	139	339	75	2,012	562
10. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment :—										
Syphilis, primary	58	3	..	..	..	..	..	..	58	3
" secondary	3	..	..	..	..	..	..	..	3	..
" latent in 1st year of infection	4	..	..	..	..	..	..	..	4	..
" all later stages	19	..	..	..	..	..	..	..	19	..
" congenital	..	..	..	..	..	..	..	..	..	..
11. Number of attendances :—										
(a) for individual attention of the medical officers	5,723	3,245	5	..	4,827	887	868	316	11,423	4,448
(b) for intermediate treatment, e.g., irrigation, dressing	..	290	..	..	30,877	3,481	..	..	30,877	3,481
TOTAL ATTENDANCES	5,723	3,535	5	..	35,704	4,368	868	316	42,300	8,219
12. In-patients :—										
(a) Total number of persons admitted for treatment during the year	11	18	..	..	34	29	..	..	45	47
(b) Aggregate number of "in-patient days" of treatment given	276	992	..	..	815	1,473	..	..	1,091	2,465
13. Number of cases of congenital syphilis in Item 3 above classified according to age periods										
Under 1 year	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1 and under 5 years	..	..	..	..	..	..	..	..	..	..
5 and under 15 years	..	..	..	..	..	..	..	..	..	..
15 years and over	..	..	..	..	..	..	..	..	..	..
14. Chief preparations used in treatment of Syphilis :—										
(a) Names of preparations	Arsenobenzene Compounds				Bismuth				Chlorostab, Bismostab	
(b) Total number of injections given (out-patients and in-patients)	4,839				..				5,447	
(c) Number of injections included in (b) given to patients who on first attendance at this Centre were suffering from primary and secondary syphilis	1,632				..				1,979	

Treatment and results.

The number of patients under treatment for venereal diseases at the end of the period under review was 1,084. The numbers were as follows :—syphilis, 874 ; soft chancre, 0 ; gonorrhoea, 210.

The number of intravenous injections of salvarsan substitute was 4,839.

In-patients.

During the twelve months the number of cases admitted were : women, 47 ; men, 45.

PREVENTION OF BLINDNESS.

My report for 1930 described the administrative scheme made under the Local Government Act, 1929, for the welfare and training of blind persons, the arrangements made to co-ordinate the work of the various committees of the Council and for securing the efficiency of the services delegated to voluntary associations.

In March, 1932, the Blind Persons Act Committee obtained the sanction of the Council to certain amendments of the administrative scheme—these were briefly mentioned last year—which now allow the council to deal with all necessitous blind persons including unemployable and other destitute blind persons, instead of limiting the scheme to the assistance of the aged, infirm and unemployable blind. The revised scheme came into operation on the first day of April, 1932.

During the year, inspections were made of the services provided by the Bristol Royal Blind Asylum, including the workshops in Park Street and the hostel for blind women workers in Woodland Road. Visits were also paid to the social welfare club held at the Central Hall, to the homes of blind homeworkers, and to the home for unemployable and middle aged blind women in Gordon Road, established by the National Institute for the Blind.

The arrangements made by the Bristol Royal Blind Asylum for the registration, certification, employment, training and welfare of the blind were reported to be adequate and efficient, but suggestions have been made with the object of improving the system of registration and certification. The latter has already been secured by the adoption of the entire scheme recommended by the Prevention of Blindness Committee of the Union of Counties Association for the examination and certification of blind persons. Representations have also been made to the Blind Persons Act Committee regarding the continued existence of two homes in the city for blind women.

The number of blind persons on the register at 31st March, 1932, was 634, fifty-four blind persons having been registered during the year. The net cost of the work of the Blind Persons Act Committee for the year was £8,635, or £13 13s. 11½d. per blind person on the register. Forty-eight applications for the certificate of blindness required to take advantage of the Wireless Telegraphy (Blind Persons' Facilities) Act, 1926, were granted during the year, making a total of 296 to date.

The following is a summarised list of blind persons now under the care of the Bristol Royal Blind Asylum :—

Resident pupils in the school	...	...	117
Workers and adult pupils in the workshops			87
Home workers	...	...	58
Women resident in the hostel	...	...	19
Blind persons visited by Home Teachers			
(not included above)	...	...	370
Unemployable blind assisted by grants	...		138

I append a report by Dr. R. R. Garden, certifying ophthalmic surgeon to the Council, on the work in 1932 at the Education Committee's eye clinic, to which applicants for registration are referred for ascertainment and certification in accordance with the Blind Persons Act, 1930.

Blind Persons Clinic.

Report by R. R. GARDEN, M.A., M.B., D.O.M.S., D.P.H.
Certifying Ophthalmic Surgeon.

During 1932, the work of examining persons on the Blind Register was continued, and it is anticipated that this revision will be completed by the end of 1933. Altogether 78 sessions were held, comprising 56 clinics and 22 periods of home-visiting for the purpose of examining invalids.

The total number of people examined during the year was 410, including 329 already on the Register, 52 new applicants for the pension, and 29 re-examinations. Of the old cases, 8 were found to have more sight than the definition allowed, and of the new cases 37 were entered as "too blind to perform any work for which eyesight is essential," while 15 had too much sight to be accepted.

In regard to the causes of blindness in the old cases, it is intended to make an analysis when the revision of the Register has been completed. The following is a summary of the eye defects found in the 37 new cases registered during the year.

Congenital anomalies	...	...	...	...	1
Inflammatory disease of cornea, ulcerative	...	...	...	...	1
" " " interstitial	...	...	...	...	1
Other keratitis	...	...	...	...	1
Iritis and irido-cyclitis	...	...	...	...	2
Cataract	...	...	...	...	6
Choroditis, non-myopic	...	...	...	...	3
Retinitis	...	...	...	...	2
Retinitis pigmentosa	...	...	...	...	2
Detached retina	...	...	...	...	1
Optic atrophy	...	...	...	...	2
Myopia	...	...	...	...	5
Glaucoma, primary...	...	...	...	...	6
" secondary	...	...	...	...	4

37

Every case, new and old, was studied with a view to improving the vision or alleviating any suffering which might exist, and it was possible in several cases to do so. Among the old cases, several

were recommended to have glasses, or referred to institutions for treatment. A number of new applicants only required suitable glasses to render their sight useful again. One applicant, operated on for cataract some years previously, had gradually lost her vision because an after-cataract had developed. An operation for this was advised and performed, with the result that within a few weeks useful sight was restored. These are instances of the way in which the clinic can prove beneficial, apart from its function as a centre for certification.

The question of dealing with persons whose consent to operation is unreasonably withheld where the prospect for recovery of sight after operation is quite good is, however, a difficult one. Last year six cases were referred to an eye institution with a view to operation. One of them had an operation performed, with slight improvement, but the other five declined treatment for various reasons. Two complicated cases refused operation because no definite promise of improvement could be given, and one because he had already undergone three operations in one eye.

The remaining two have cataracts, and the prospect for recovery of sight after operation is quite good. This has been pointed out to them more than once, but they refuse to have any operative treatment.

While it would not be justifiable to press for treatment in the doubtful cases, some official opinion as to the certification of persons with conditions like cataract whose consent to operation is unreasonably withheld seems called for.

DENTAL REPORT.

By HANBURY HAZELL, L.D.S.

The most prominent feature of dentistry is that which definitely effects a cure of localised dental or neuralgic pain by the radical treatment of extraction of the tooth. Less frequently can referred pain of dental origin be cured by conservative methods, although it may be relieved. While certain general diseases are easily recognised and accurately diagnosed by the physician, the cause or causes sometimes remain unknown and so a difficulty arises as to what might be curative treatment. By removing the cause a cure is assured and a search is made by examination of the various structures for that cause. Of late years the frequency of oral sepsis allied to general disease has been recognised and invariably an opinion of the mouth condition is solicited. At the most, a dental surgeon can only hope to remove the dental sepsis and restore the patient to good dental health, so that no hindrance to general treatment arises from the mouth. It is the good fortune, rarely however, to remove a perplexing cause of a remote bodily condition, and during the year two cases are recorded, where dental treatment has, in one case effected a cure and in the other a very definite improvement and made amenable to general treatment. It is not often within the province of dental surgery to provide the cure of a distressing and unknown general malady and I am indebted to Dr. Peters for the brief details of a case at the *Ham Green Isolation Hospital* which is interesting in the manner of the termination of the disease.

Boy, age 11, admitted for meningitis, *onset* : sore throat, headache, ear-ache. *On admission* : pale, languid, fully

conscious and some oedema below lobe of right ear. Reflexes normal, Kernig sign negative, pupils normal. No neck rigidity, heart and lungs normal, abdomen tumid, Widal reaction negative, blood culture negative. Temperature unsettled for 14 days swinging between 97 and 103. During this time acute headache. Teeth quite good, except lower first permanent molars which were carious. Slight pain on right side and only slight redness and puffiness of gum in lower molar region. The lower second permanent molars semi-erupted and had appearance of impacting on the first molars. It was decided that such impaction was the probable cause of pyrexia. On the 18th day the lower first permanent molars were extracted under nitrous oxide anaesthesia, and the temperature settled at normal for 12 days afterwards when the boy was discharged.

At *Ham Green Sanatorium* the patients in the acute stages of tuberculous disease have teeth which appear likely to, and soon do decay. The low calcium percentage content in the tooth structure, in spite of a sufficiency of Vitamin D, probably accounts for this liability. Where the disease has become chronic with fibrosis of healed lesions, the dental decay too seems to be arrested, but there seems a more general chronic infection of the gums and roots of the teeth. Apart from the removal of the obviously infected and painful tooth, it has been necessary to advise in many cases the clearance of all septic teeth and roots which probably caused a general infection and certainly were useless for the proper mastication of food. Owing to the poor general condition of the patient and the slow healing of the bony sockets after extraction it is thought unwise to extract more than two or three teeth at one sitting. There is too, the possibility of re-infection of such a large bony wound (after multiple extractions) by the sputum. Especially is this the risk should many sockets be bared in the lower jaw, as free drainage is difficult on account of its anatomical position. Invariably before these cases of complete extraction of teeth it is necessary to clean up the mouth by removal of tartar and gum treatment and by frequent antiseptic mouth washes.

At *Southmead Hospital* patients are referred by the medical officers for dental advice and treatment and usually this is gladly accepted by the patients. In one or two cases though, no amount of persuasion or explanation could overcome the obstinate refusal to submit to dental treatment of any kind. The only excuse held for such behaviour is that the "teeth do not ache" although the gums may be oozing pus. Happily such refusals are very few and far between and patients with acute and chronic gastric and rheumatic conditions are frequently alleviated by the removal of septic dental foci. One case in particular is worthy of note. A female, age 21 years, had been a patient at the hospital for over a year with osteo-arthritis. Just after admission in 1931 several septic roots and teeth were removed but no appreciable improvement was observed. During the summer of 1932 dental advice was again sought and although macroscopically the teeth were not such as to justify extraction the X-ray photograph revealed a rarefying periodontitis and osteitis sufficient to cause infection. Under nitrous oxide anaesthesia all the remaining teeth were removed. After six months it was reported that a definite advantage had been gained and that the progress of the disease, at any rate, was checked.

The teeth of the children at the *Children's Homes* are on the whole, quite good, but as pointed out earlier in the year in the special report of the dental condition of the children at the Homes, the gum condition was unsatisfactory and an unbalanced diet held responsible. More interest in dental hygiene is shown now by the children and during the latter part of the year much improvement was noticed, due in no small measure to the regular use of the tooth brush.

Dental treatment is carried out at *Frenchay Park Sanatorium* with the usual sanction of parents and always with the express approval of the medical superintendent. Such approval is necessary since most cases are under some form of immobilization treatment. The incidence of dental caries among these children is in no way different from that obtaining among the school population. The dental condition of these children is neither better nor worse than the school children, except that perhaps the Frenchay children regularly clean their teeth.

Stapleton Institution. There is no reason for believing that patients of this type have better teeth or worse than the majority of people in everyday life, but it was noticed that the patients examined at this particular institution on the average had remarkably sound teeth. The same does not apply for the condition of the soft tissues of the mouth, however, and as a marked gingivitis was almost universally apparent, it would not be hazarding to state the cause as wrong diet. In most of the patients seen, in addition to the gingivitis and slight pyorrhoea there were heavy deposits of salivary calculus on the teeth. It was light in colour and of a soft nature; consequently easily removable. Owing to its soft composition it is certain that the tartar was formed rapidly. Without enunciating the various theories and suggestions for this deposit, everything suggests that something is lacking in the diet which, if present, would give a more balanced metabolism.

Now we know the importance of vitamins it is easy to suspect a deficiency of one or other of these vital substances. As the teeth are well calcified and not over prone to decay it can be assumed that sufficiency of vitamin D is obtained. It seems that a deficiency of vitamins A and C would account for the condition of the gums and the laying down of salivary calculus. Although the gum condition is nothing like so bad as one would find with scurvy proper, in the early stages of this deficiency disease the gums would present a marked resemblance to the condition of many patients at Stapleton.

Vitamin C definitely cures scurvy and an addition of this to the diet in the form of fresh fruit would be beneficial. Vitamin A, found in butter, milk, vitaminised margarine and mammalian liver, would also prove a valuable adjunct to the diet. With the addition of vitamins A and C better dental health can confidently be expected. Of course the personal habits of these patients, when taken into account, do not help us at all, as the patients of both sexes are very forgetful or entirely ignorant of oral hygiene, which must be considered a serious handicap.

The co-operation and assistance of the medical and nursing staffs at the various institutions visited, as regards selection, suitability and preparation of patients, have been invaluable and the success of any undertaking must necessarily depend on such a happy and sympathetic relationship.

Ham Green Hospital.

Table of admissions and discharges, 1932.

	Remaining in hospital end of 1931	Admission as notified	DISCHARGED						DISCHARGED		Total	Mortality rate per cent.	Remaining in hospital at end of 1932
			Diagnosis confirmed		With super-added infections		Total	Mortality rate %	DISCHARGED				
			Recovered	Died	Recovered	Died			Diagnosis not confirmed.				
									Recovered	Died			
Scarlet fever ...	9	429	364	2	1	...	367	0.5	18	...	18	...	67
Diphtheria ...	82	577	449	19	22	...	490	3.8	84	2	84	...	71
Enteric fever ...	3	13	7	2	...	...	9	22	6	1	7	...	...
Measles ...	1	21	15	1	1	...	17	6	3	...	3	...	2
Erysipelas ...	2	59	47	3	1	...	51	6	5	2	7	...	3
Pneumonia ...	...	17	11	3	...	...	14	21	...	...	...	...	3
Influenza ...	...	11	8	...	...	...	8	...	2	...	2	...	1
C.S.F. ...	...	4	1	2	...	...	3	...	...	1	1	...	...
Whooping cough	3	47	42	6	...	...	48	12	2	...	2	...	...
Mumps ...	...	9	6	...	...	...	6	...	1	...	1	...	2
Chicken pox ...	1	16	13	...	...	...	13	...	3	...	3	...	1
German measles	...	2	2	...	...	...	2	...	...	...	...	...	...
Mixed infections and observation cases ...	2	41	35	3	...	...	38	...	...	...	...	...	3
	103	1,246	1,000	41	25	...	1,066	...	124	6	130	...	153

(The apparent numerical discrepancies in the horizontal columns are due to the alterations in the diagnosis of the original notifications).

IX.—REPORTS OF MEDICAL SUPERINTENDENTS OF CITY HOSPITALS, SANATORIA, ETC

HAM GREEN HOSPITAL AND SANATORIUM.

Report by B. A. I. PETERS, B.A., M.D., D.P.H.

Resident Medical Superintendent.

Staff.

Resident medical superintendent	B. A. I. Peters, B.A., M.D., D.P.H.
Assistant resident medical officers	B. J. Boulton, M.B., Ch B.
" " " "	... C. Short, M.B., Ch.B., D.P.H.
" " " "	... F. W. Gapper, B.Sc., M.B., Ch.B.
Matron	... Miss K. M. Baldwin.

Assistant matrons, 3; sister tutor, 1; night superintendents, 2; ward sisters, 12; staff nurses, 11; probationers, 62; dispenser, 1; clerks, 2; domestic staff, 77; male servants, including engineers, orderlies, &c., 17.

Scarlet fever.

A slightly increased number over last year's admissions is shown. The disease in the autumn was more severe than in recent years, the number of septic complications being increased. Two deaths occurred, one from septic meningitis and the other from septic broncho-pneumonia giving a mortality of 0.5 per cent.

By use of our new methods arising out of the research work being carried on at this institution, the renal complications have been almost abolished, four cases only showed a transient albuminuria (one per cent.) No cases of nephritis occurred. This compares with our former experience of 11 per cent., a 90 per cent. reduction in this serious complication. The "Practitioner" of November, 1932, published a full account of our methods.

Ten cases were found to have endocarditis on admission, four developed this complication as a result of the disease. Eight return cases occurred giving a return case rate of 2.1 per cent., five of these cases occurred in October and November when the disease showed signs of becoming epidemic. A sudden drop in admissions occurred in December and was followed by the influenza epidemic. I have not before observed such a sudden cessation of scarlet fever at this time of year.

Diphtheria.

A considerable fall in the admissions for this disease occurred but the proportion of "dangerously ill" cases was almost identical, *i.e.*, 22.5 per cent. compared with 23 per cent. for the former year. The disease is still of a severe type in Bristol. Nineteen deaths occurred giving a death rate of 3.8 per cent. Of the fatal cases, 10 were moribund on admission; of these, 6 expired in under 12 hours and another four within 48 hours of admission from an overwhelming toxæmia, six others died from heart failure in the second week and another three from late paralysis. The average day of disease of these fatal cases from admission was fourth day. Our special methods of treatment have now been applied to 2,496 cases with 71 deaths, *i.e.*, 2.8 per cent., a very low figure considering the type of diphtheria now prevalent.

	Total cases	Deaths	Death rate per cent.
Orthodox treatment 1928-9 ...	1,235	67	5.3
New treatment 1930-32 ...	2,496	71	2.8

It will be seen that the mortality is almost halved subsequent to adopting our new methods.

In addition to the genuine cases of diphtheria discharged last year, 86 notified as such were discharged in whom the diagnosis was considered to be an error, *i.e.* 14 per cent. of the total notifications. It is preferable that such suspicious cases should be admitted rather than to await, until too late, a correct bacteriological diagnosis but it taxes sorely our isolation accommodation.

Erysipelas.

Fifty-one cases of this disease completed treatment during the year, of which three died. A considerable amount of research work on chemitherapeutic lines is being continued on this disease, the results will be shortly ready for publication.

Cross infection.

Fourteen cases contracted a second disease while in hospital, namely scarlet fever, nine; chicken pox, four; whooping cough, one; giving a cross infection rate of 1.3 per cent. The chief danger arises in the convalescent diphtheria wards from the presence of an unrecognisable scarlet fever carrier; with "aseptic" nursing the acute wards remain almost free. A method of active immunization against scarlet fever before transferring the diphtheria cases to the convalescent ward is being attempted with some measure of success.

Operations.

Sixty-six operations were performed during the year, chiefly by the aural surgeon.

Staff sickness.

Eighty-three new entrants were schick and dick tested. Forty-one were schick positive and 19 dick positive. These were all immunised before entering the fever wards, as a result of this no member of the staff has contracted diphtheria for over three years nor scarlet fever for over two years.

The value of these methods is illustrated by the fact that our wards are seldom without nurses from the general hospitals suffering from these diseases, whilst our own staff who run an immensely greater risk remain free.

No infectious sickness (excluding tuberculosis) of any sort was contracted by any member of the staff during the year.

One nurse developed tuberculous peritonitis. She was removed to a general hospital and eventually died from a perforated tuberculous appendix. Her loss was deeply felt as she was a popular and efficient member of our staff.

NOVERS HILL HOSPITAL.

Staff.

Visiting medical officer ... B. A. I. Peters, B.A., M.D., D.P.H.

Home sister ... Mrs. E. E. Lane

Nursing superintendent... Miss E. R. Wilcox

Ward sister, 1; staff nurses, 2; probationers, 6; domestic staff, 11; male servants, including engineer, lodge-keeper, etc., 6.

Three hundred and seventy-seven (377) cases of scarlet fever completed their convalescent in this hospital during the year and three cases of chicken pox were admitted direct.

HAM GREEN SANATORIUM.

Table of admissions and discharges, 1932.

Remaining in sanatorium at end of 1931	Admitted	Discharged	Died	Remaining in sanatorium at end of 1932
122	300	212	79	131

Tuberculosis.

The use of *Crisalbine* has been continued with great benefit in many of the acute young adult type of tuberculosis. By a certain method of blood examination we are succeeding in arresting the troublesome reactions which formerly characterised its use.

We have still to deplore the very large number of cases who first come under sanatorium treatment in a hopelessly advanced stage of the disease where no form of treatment holds out any hope of any improvement. An inquiry into the cause seems to show that in 70 per cent. of such cases the delay is caused by the patients either not seeking any medical advice until too late, or refusing to accept sanatorium treatment until too late. In the remaining 30 per cent. the true cause of the condition has been apparently not discovered by the medical attendant as the disease may be very insidious in its onset and may not be recognisable without expert X-ray examination.

Return showing the results of observation of doubtfully tuberculous cases discharged during the year.

Diagnosis on discharge from observation.	Pulmonary tuberculosis						Non-pulmonary tuberculosis						Totals		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Non-tuberculous	1	...	...	4	5	...	...	...	...	...	...	...	5	5	...
Doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	...	...	4	5	...	...	...	...	...	...	...	5	5	...

Return showing the immediate results of treatment of definitely tuberculous patients discharged during the year.

Classification on admission to the Institution.		Condition at time of discharge.	Duration of residential treatment in the institution.										Grand Totals					
			Under 3 months.			3-6 months.			6-12 months.			More than 12 months			Totals			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.		F.	Ch.	M.	F.	Ch.
PULMONARY TUBERCULOSIS	Class T.B. minus.	Quiescent ..	2	..	..	4	1	..	2	..	..	..	..	..	..	..	9	
		Not quiescent ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Class T.B. plus Group i.	Quiescent ..	2	2	..	3	2	..	..	2	..	..	..	..	..	..	11	
		Not quiescent ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Class T.B. plus group ii.	Quiescent ..	1	4	..	6	7	..	2	..	..	1	..	..	..	..	21	
		Not quiescent ..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	3	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Class T.B. plus group iii.	Quiescent ..	2	1	..	16	8	..	10	3	..	..	2	..	..	..	42	
		Not quiescent ..	19	17	..	10	21	..	14	11	..	4	1	..	..	..	97	
		Died in institution	31	18	..	10	5	..	7	4	..	4	..	..	..	..	79	
NON-PULMONARY TUBERCULOSIS	Bones and Joints	Quiescent ..	1	1	..	..	1	..	..	..	..	..	..	..	..	3		
		Not quiescent ..	..	..	..	3	..	..	..	..	..	2	1	..	..	..	6	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Abdominal	Quiescent ..	..	..	..	..	2	..	2	..	..	..	1	..	..	..	5	
		Not quiescent ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Other Organs	Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
		Not quiescent ..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Peri-pheral glands	Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
		Not quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
		Died in institution	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

One patient stayed only 11 days.

FRENCHAY PARK SANATORIUM AND ORTHOPAEDIC HOSPITAL.

Report by K. H. PRIDIE, M.B., B.S., F.R.C.S.,
Resident Medical Superintendent.

Staff.

Resident medical superintendent K. H. Pridie, M.B., B.S., F.R.C.S.
Consulting orthopaedic surgeon G. R. Girdlestone, Esq., F.R.C.S. (Eng.)
Consulting radiologist ... T. B. Wansbrough, M.B., Ch.B.
Visiting physician ... C. J. Campbell Faill, F.R.C.P., Ed.
Visiting surgeon ... H. Chitty, M.S., F.R.C.S., Eng.
Matron ... Miss L. Allen.

Ward sisters, 5; staff nurses, 3; probationers, 17; schoolmistresses, 2;
domestic staff, 11; engineer, 1; porter, 1.

Analysis of discharges during 1932.

Type of case.	Quiescent	Non- Quiescent	Died	Non- T.B.	Doubt- ful	Total
Pulmonary	41	5	1	—	—	47
Non- Pulmonary	30	2	—	—	—	32
Observation	—	—	1	26	7	34
Total ...	71	7	2	26	7	113

Additions to the equipment.

During the year many improvements have been made in the equipment and facilities :—

Both wards have been provided with surgical wash basins, and electric instrument sterilisers. An extension has been made to the balcony of ward 3, this has enabled all the bed cases to receive insolation during the summer months. Two radiant heat lamps have been fitted to the duty room of the surgical ward. A wireless set has been presented to the hospital. This has been a great joy to the children and the staff.

I have designed a sanatorium bed, which is a modification of that used by Dr. Rollier at the international clinic at Leysin. This has been made by Messrs. Nesbit Evans & Co. Ltd., and has been on trial at this hospital for the last six months. As shown in the illustration the head of the bed lets down as a table on which the child can take meals and do school work. The mattress frame is totally floating and suspended at both ends so that the height of either end can be adjusted. In the illustration it is in the position for treatment of the convalescent case of tuberculous spine in the prone position, the slant takes the weight off the shoulders and transfers it to the iliac region.

The mattress frame can be inclined in the opposite direction in the treatment of a tuberculous hip with extension.

X-ray plant.

A 2.5 kw. X-ray tube has been added to the equipment. During the year a record of all the exposures has been kept and recorded on each film so that it can be repeated at any future date. This system has improved the standard of the results obtained, and very rarely are any films wasted by wrong exposure.

Much of the X-ray work has been done using Ilford X-ray paper instead of films, and for bone subjects I find the pictures easier to read than the films. These papers have the advantage that they are cheaper and do not scratch or mark.

Operations.

Forty-eight operations were performed during the year.

Other treatment.

Arrangements have been made for regular dental treatment to be given to the patients by the full-time dental officer.

Rare and interesting case.

A case admitted with the diagnosis of tuberculous disease of the spine was found to have multiple cysts in the centre of several of the vertebræ, in the skull, pelvic bones, and both femora, a section of the contents of a tumor of the head of the left humerus showed the condition to be one of multiple endothelial myeloma.

Plate I shows cysts in the dorsal and lumbar vertebræ causing collapse of three segments.

Plate II shows cyst-like spaces in both ilia and in the heads and necks of both femora.

THE USE OF THE VENTRAL POSITION IN THE TREATMENT OF TUBERCULOUS DISEASE OF THE SPINE IN CHILDREN.

By K. H. PRIDIE, M.B., B.S., F.R.C.S. (Eng.)

Medical superintendent, Frenchay Park sanatorium and orthopaedic hospital, and assistant orthopaedic surgeon to the
Bristol City Council.

The use of the ventral position in the treatment of tuberculous disease of the spine in children.

It is very difficult to discuss the treatment of tuberculous disease of the spine as the treatment is so lengthy and the results so distant and so easily modified by the future home and social conditions of the patient. It is easy to produce destructive criticism of the accepted methods of treatment, but very hard to suggest any treatment which is an improvement on the standard methods.

The disadvantages of the treatment of cases of some modification of the double abduction spinal frame can be considered under the following headings :

- (1) General condition and comfort of the child.
- (2) The muscular system.
- (3) The skeletal changes.

(1). The child treated on a double abduction frame can do very little for itself, its education is very limited, the direct line of vision and consequently its outlook on life is limited to a white ceiling or a blue sky. Its external surroundings have to be viewed through a mirror or after contortions of the neck. In the supine position mental concentration is difficult and reading becomes very tiresome, writing for any length of time an impossibility.

(2). One or two years' treatment on a spinal frame causes a marked generalised wasting of the muscles of the body especially those of the erector spinae group. The skin becomes slightly oedematous over the outer and posterior parts of the thigh and trunk. During the cold weather the efforts of the child to draw the legs together to keep warm tends to produce knock-knee. In spite of the constant efforts of the masseuse the leg muscles waste. Great care has to be taken in the nursing of these cases to prevent hyper-extension of the knees, foot-drop, stiff knees and hips.

In many cases the disuse atrophy is so extreme that the convalescent period has to be prolonged, the time being spent in muscular development and re-education, and finally some form of posterior spinal brace has to be worn to take the place of the atrophied posterior spinal muscles.

(3). Prolonged treatment with absolute immobilisation causes marked decalcification of all the bones of the body added to this there is the local decalcification due to the tuberculous lesion.

This marked decalcification attended by an increased excretion of calcium from the body seems to predispose to renal calculi.

There is often a marked flattening of the chest from before backwards in those children that have been treated in spinal frames for several years. This is accompanied by a lateral spreading of the ribs which gives the patient a very peculiar appearance. Thus must be due to the weight of the body on the very decalcified ribs.

In order to overcome these defects of the frame treatment I have been treating cases of tuberculous disease of the spine in children where the disease has been situated in spinal segments between the mid-dorsal and lower lumbar regions, in the prone position in plaster hyper-extension beds.

The method of construction of the plaster beds.

The child is placed on an orthopaedic table as shown in *Figure I*. The front of the abdomen and legs are coated with ung zinci et ol.ricini. One layer of plaster bandages is applied to the front of the child, the rest of the case is made from pressed slabs of plaster which are applied till the whole case is about $\frac{3}{8}$ in. thick. This is removed and cut to the correct shape. The feet are then fixed on the cast. The inside is polished till it is smooth. The case is then dried and afterwards varnished with cellulose varnish.

If the case is carefully made no padding is needed, in fact the children are more comfortable without it. The plaster beds are screwed to the galvanised iron top of the ordinary beds.

Important points in the construction of the plaster beds.

The legs are abducted, the knees slightly bent to prevent the knee ever becoming fully extended. The child is secured to the beds by a bandage round each thigh and round the lumbar region. From the knee downwards the child can move the legs as much as he pleases. There can be no tendency to develop drop foot, knock knee or hyperextension of the knee.

A certain movement of the spine is possible in the direction of increased hyper-extension, the plaster prevents flexion and lateral movement. The constant muscular effort of lifting the head and shoulders develops the posterior spinal muscles to an extraordinary degree, and these muscles are more efficient than any spinal brace during the convalescent stage.

Figs. 2 and 3 show a plaster bed as it is when finished. Slight modifications are made when the lesion is in the mid-dorsal region, in these cases a head rest is made, as shown in *Fig. 4*. When the lesion is situated in the lumbar region, no head-rest is fitted.

Figs. 5 and 6 show the patients in the plaster beds; a small bed table is provided in front of the child, on which the patient can rest his arms, and on which two pillows are put for the head to rest at night.

Duration of treatment in plaster beds.

When the disease appears to be quiescent, as shown by temperature chart, radiological examination, and good compensating curves have developed, the child is taken out of the plaster bed and treated in the prone position during the day, with a triangular pillow under the upper part of the trunk, to maintain the hyper-extension of the spine. During the night they are allowed to sleep on their backs. During the periods when children are free in bed, exercises are performed every day, in the form of leg movements. This trial period lasts at least three months, and, should the child progress satisfactorily, it is then allowed crawling exercises, and finally, to walk.

During the convalescent period the child is either in the prone position, or walking. Great care is taken to prevent the child sitting or standing about. They attend school, and are taught in the prone position on canvas stretchers.

CONCLUSION.

Comparing my series of cases, about half of which have been treated in the prone position as outlined above, and the other half in the dorsal position in double abduction frames, I find

- (1) The children are happier in the prone position, they eat better, do the school work better, and need less attention.
- (2) Their general muscular tone is splendid. Their compensating curves develop much more quickly, there is no stiffness of the knees, limited movement, or weak ligaments, even after two years of treatment. There is not such marked generalised decalcification as one finds after even short periods of frame treatment.

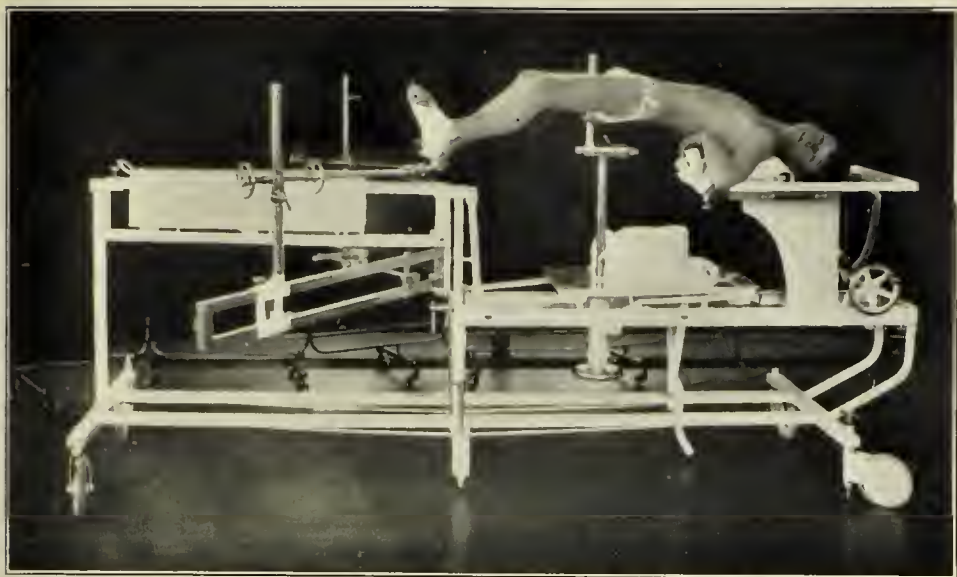


FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



PLATE 1.

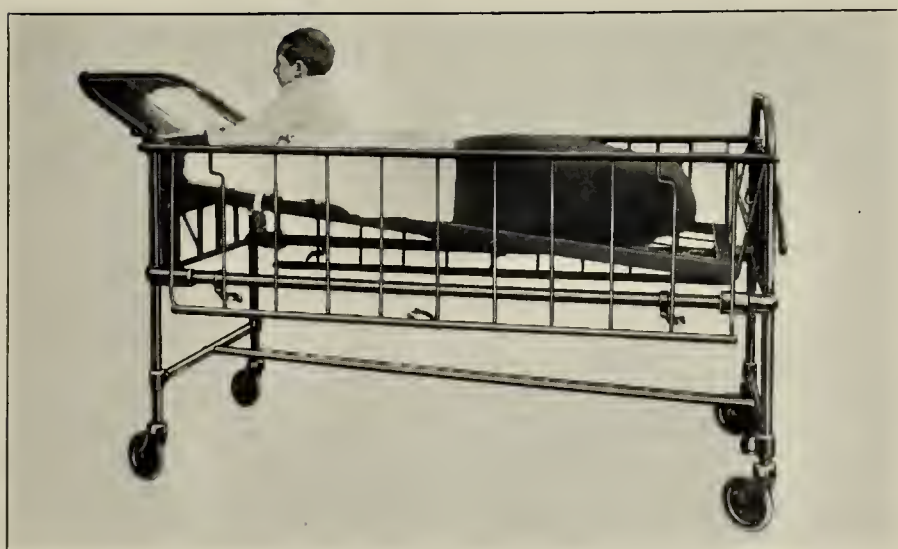


PLATE 3.



PLATE 2.

SOUTHMEAD HOSPITAL.

Report by P. PHILLIPS, M.D., M.Sc., Ch.B.,
Resident Medical Superintendent.

Staff.

Resident medical superintendent	P. Phillips, M.D., M.Sc., Ch.B.
Assistant resident medical officers	R. W. Savage, M.R.C.S., L.R.C.P.
	O. J. P. Bollon, M.B., Ch.B.
	J. L. W. Davies, L.R.C.S., L.R.C.P. Ed.
	(for obstetrics).
Visiting physician	... Professor J. A. Nixon, C.M.G., M.D., F.R.C.P., Lond.
„ surgeon	... A. Wilfred Adams, M.B., M.S., F.R.C.S.
„ consultant children's diseases	... O. C. M. Davis, M.D., D.Sc., M.R.C.P.
„ pathologist	... A. D. Fraser, M.B., Ch.B., D.P.H.
„ dental surgeon	... G. F. Fawn, L.D.S., B.D.S.
„ gynaecologist and obstetrician	... Professor R. S. S. Statham, M.D., Ch.M.

Orthopaedic clinic—

Surgeon	... Professor E. W. Hey Groves, M.D., D.Sc., M.S., F.R.C.S., Eng.
„	... H. Chitty, M.S., F.R.C.S., Eng.
Assistant surgeon	... K. H. Pridie, M.B., B.S., F.R.C.S., Eng.
Steward	... Mr. T. Jones
Matron	... Miss M. E. Price

Assistant matron, 1; sister tutor, 1; night sisters, 2; theatre sister, 1; home sister, 1; maternity sister, 1; ward sisters, 12; staff nurses, 15; probationers, 82; assistant steward, 1; clerks, 2; masseuses, 2; dispenser, 1; domestic staff, 62; male servants, including storekeeper, engineer, etc., 36.

During 1932 the most important developments in the hospital have been :

- (1) The completion of a scheme for improving the accommodation and equipment of the maternity department.
- (2) The introduction of steam sterilizers into the operating theatre, together with modernisation of its equipment.
- (3) The transfer of mental defectives to Hortham Colony on 31st March, 1932.

With economy measures still in force, nothing has yet been done to utilise the site where the temporary buildings which housed these cases stand. For the time being a portion is being used as a recreation room for nurses.

The beds available were classified as follows :—

Medical	...	...	...	156
Surgical	...	...	...	72
Children	...	...	...	52
Chronic sick	...	...	...	134
Tuberculosis	...	...	...	68
Isolation	...	...	...	34
Maternity	...	...	...	56
Total	...	...	...	572

The average number of beds occupied daily was 549.

- (a) Highest (on 8th March, 1932) ... 671
- (b) Lowest (on 1st August, 1932) ... 464

	1932	1931	Increase	Decrease
Average number beds occupied daily	549	612	...	63
Ditto excluding babies born in wards	519	588	...	69
Average stay-days	25	26	...	1
Number of operations ...	378	278	100	...
Average cost per bed ...	31/2	33/-	...	1/10

These decreases are accounted for by the fact that the hundred mentally defective children were transferred to Hortham Colony on March 31st, 1932 and the use of these beds suspended.

Massage department.

In-patients.	1932	1931	Increase	Decrease
Total massage treatments ...	6,298	6,361	...	63
Total electrical treatments...	513	252	261	...
Radiant heat treatments ...	318	122	196	...
Total exercises, S.R.E. ...	213	158	55	...
Total treatments	7,342	6,893	512	63

It is gratifying to see an increase in the total number of treatments given. Only two masseuses are employed in this department at present. As soon as it is practicable, I should like to see this number increased and the department further developed.

X-ray department.

Constantly increasing demands are being made for X-rays. In the hospital itself, orthopaedic cases and increased surgery add to the work, whilst many cases from the Bristol mental hospital and Hortham colony have also been dealt with. This makes it more important than ever that the city supply of alternating current should be made available as soon as possible. When this has been done a shock-proof and more powerful installation should be considered.

	1932	1931	Increase
Films used	70 dozen	50 dozen	20 doz.
Cases screened	230	180	50

Statistics Relating to Patients for 1932.

Classification of diseases.	Remaining end of 1931	Admissions	Discharges	Deaths	Operations	Remaining end of 1932
1. Infectious and parasitic (1—44)— Influenza, encephalitis lethargica, tuberculosis, venereal diseases ...	78	189	141	57	34	69
2. Cancer (45—53)—other tumors (54-55)	30	161	59	106	15	26
3. Rheumatism, nutrition, etc. (56-69), rheumatic fever, diabetes ...	26	102	86	13	—	29
4. Blood and blood forming organs (70-74)	5	11	7	3	—	6
5. Chronic poisoning (75-77)	—	—	—	—	—	—
6. Nervous system and sense organs (78-89) and mental defectives	126	314	323	57	79	60
7. Circulating system (90-103) and heart disease	66	233	125	100	—	74
8. Respiratory system (104-114) and pneumonia	48	245	195	46	7	52
9. Digestive system (115-129)—ulcer of stomach or duodenum, appendicitis, diarrhoea and enteritis, cirrhosis of liver	21	98	86	21	51	12
10. Genito-urinary system and annexa (130-139)—nephritis	15	148	109	36	41	18
11. Pregnancy and parturition (140-150)— Puerperal sepsis	69 nil	Mothers 543 Babies 521 nil	Mothers 536 Babies 521 nil	2 nil	48 nil	74 nil
12. Skin and cellular tissue (151-153) ...	18	98	100	nil	14	16
13. Bones and organs of locomotion (154-156)	24	107	98	13	47	20
14. Congenital malformation (157) ...	20	21	15	2	28	24
15. Diseases of early infancy (158-161)— Premature birth	—	31	27	4	—	—
16. Old age (162)	24	26	27	15	—	8
17. Violence (163-198)	5	123	101	22	—	5
18. Ill defined diseases (199-200) ...	30	153	149	9	14	25
TOTALS ...	605	3,124	2,705	506	378	518

Diathermy.

	1932	1931	Increase
Cases treated	265	110	155

This increase is due to the use of this treatment in many cases of chronic arthritis. Whilst one cannot claim many cures from its use, most patients derive considerable relief from pain by the application of this form of electricity.

Radium.

As in the previous year, all patients requiring radium treatment have been transferred to the radium centre at the Bristol Royal Infirmary.

Medical section.

Diseases of the respiratory system formed the largest group of causes for the admission of adults and children. Next come nervous diseases and affections of the circulatory system. The number of deaths from the latter group were much greater. One hundred and sixteen patients with skin diseases were treated.

The accommodation for tuberculosis has been fully utilised during the year. Some pulmonary cases were transferred to Ham Green in an endeavour to use the Southmead beds for surgical tuberculosis.

Many cases suffering from the sequelae of encephalitis lethargica have been treated. In none have I found any marked improvement. Several have died, the cause of death usually being some inter-current disease such as broncho-pneumonia.

Surgical section.

During the year 378 operations were performed under general anaesthesia. In 51 cases abdominal section was performed. No case of death under an anaesthetic was recorded.

Cancer still ranks high among the causes of death and of the 191 cases treated during the year, 106 proved fatal. Most of these, however were advanced cases suffering from recurrences following radium or operative treatment.

In the latter part of the year the operating theatre was redecorated. A shadowless lamp was also obtained and shortly a new operating table is to be added. One hundred more operations were performed than in 1931, and with improved equipment we anticipate still greater demands on this section.

At the best our present theatre was built as a war-time emergency, and in my opinion and that of the consultants, a second theatre should be provided to meet future developments. The necessary changing rooms and bathrooms could then be provided for surgeons and theatre staff.

Orthopaedics.

These cases were accommodated in beds in the surgical wards, whilst surgical tuberculosis was dealt with mainly in the chalet and women's T.B. ward. The number treated was more than double the figure in 1931.

Any large scale improvement in the arrangements available for these cases has been delayed by the financial stringency of the present time.

Gynaecological section.

Fifty-one operations were performed in this section during the year. Of these, 29 were incomplete abortions, and from the findings at operation, there can be no possible doubt that in some cases the abortions were not due to natural causes. In my opinion, in spite of ethical difficulties about the notification of abortion or miscarriage, much valuable information might be obtained if these conditions were made notifiable.

Maternity department.

The number of maternity cases admitted again shows a marked increase, viz. :—538 as compared with 457 in 1931—an increase of 81. Ante-natal clinics were held twice during each week and at the one attended by the hospital staff, 397 women recorded 1,268 attendances.

At the beginning of December the alterations to wards "M" and "K" were completed and for the coming year the accommodation has been greatly improved. Nurseries for the children are now available and modern sterilizers have been fitted to both labour rooms. In addition the wards are smaller units, and isolation beds are provided.

For the first time for many years, two maternal deaths are recorded. Other details are as follows :—

Total number of cases (7 twins)	...	...	538
Number of still-births	...	...	20
„ cases of ophthalmia neonatorum			2
(Result satisfactory).			
„ „ „ inflammation of eyes	...		21
Puerperal sepsis	...	...	nil
Puerperal pyrexia	...	...	4

In addition a "district" adjacent to the hospital has been established under the supervision of a maternity sister. By this means 81 cases were successfully delivered in their own homes.

Finally, eleven nurses were trained for the C.M.B. examination and all were successful.

Ear, nose and throat section.

In this department eighty operations were performed during the year. This is about the same as the previous year. The improvement in the theatre has also helped this work and if a second theatre becomes available in the future, greater facilities will be offered for developments in this department.

Dental work.

A full-time dentist is now employed here in connection with the school clinics, etc. He has devoted part of his time to the work of the hospital.

Examinations and teaching facilities.

The hospital has been a centre for the nursing examinations of the General Nursing Council during the year. Facilities were also provided for the examinations in clinical medicine of the University of Bristol. These were held in June and December. On each Saturday during the terms Prof. J. A. Nixon has conducted clinical demonstrations as in former years. The course in medicine for dental students was also held here by Dr. O. C. M. Davis.

For the first time during the past year, medical and surgical films obtained from the "Kodak Medical Library," have been exhibited for the instruction of nurses.

STAPLETON INSTITUTION.

(Administered by the Public Assistance Committee).

Report by S. DATTA, M.D., Ch.B.

Resident Medical Officer.

Patients.

The number of patients treated during 1932 has been :

Males	Females	Total
336	425	761

including :—

439	certified under Lunacy Acts.
145	„ „ Mental Deficiency Acts.
177	not certified.

There has been a great reduction in the number of mental defective cases during the year, and a corresponding increase in the number of lunacy cases transferred from the Bristol Mental Hospital under section 25 of the Lunacy Act.

Training and employment of patients.

	Male	Female	Total
Total employed ...	113	155	268
Not employed ...	223	270	493
Total in residence ...	336	425	761

Some of the industrial training establishments have either been altogether closed or greatly reduced by the transfer of mental defective cases to Hortham Colony.

The women are mostly occupied in domestic, sewing and laundry work ; the men are engaged in gardening, tailoring, garage and bakery.

Alterations in the staff.

The services of a masseuse have now been dispensed with.

Dental treatment is given once weekly by Mr. Hazell, L.D.S., a member of the dental staff of the Health and Education committees.

Infectious diseases.

The following notifications were made : bacillary dysentery, 122 cases ; tuberculosis of the lungs, 9 cases ; enteric fever, 2 cases ; diphtheria, 1 case ; facial erysipelas, 2 cases.

Deaths.

There were 166 deaths during the year due to :

Senility with hypostatic congestion of the lungs, etc.	104
Cerebral vascular disease	18
Acute respiratory affections	19
Notifiable infections	8
Miscellaneous cases	17

The year has been one of the most trying for the whole staff of the institution on account of the epidemic of dysentery of last September.

However, the spirit of co-operation inspired by the master and matron has been everywhere in evidence, and the work, though onerous, has been made comparatively easy for me.

EASTVILLE INSTITUTION.

(Administered by the Public Assistance Committee).

Report by J. A. LANSON ROBERTS, L.R.C.P., M.R.C.S., M.B., Ch.B.,
Medical Officer.

During 1932, 1,088 persons were admitted to the institution ; of these, 549 were admitted to the sick wards direct, 351 males and 198 females.

The sick wards contain 156 beds of which an average of 141 have been occupied. In all 515 males and 284 females were admitted to the sick wards. The following tables show (a) the source of admission to sick wards and (b) the causes of admission.

Table A.—Admissions to sick wards.

1931		Admitted from		1932 Total Admissions.
		Other parts of Institution.	Casual Wards and Outside.	
497	Male ...	164	351	515
224	Female	86	198	284
721	Total	250	549	799

Table B.—Causes of admissions.

	Senility	Chest conditions	Cardio-vascular	C.N.S.	Acute febrile	Septic & ulc. legs
Male	68	81	44	26	119	81
Female	97	64	37	46	6	11
Total	165	145	81	72	125	92

Table B—(continued).

	Malignant	Others	Total
Male ...	11	85	515
Female ...	7	16	284
Total ...	18	101	799

Table C is arranged to show destination of discharges from the sick wards and number of deaths.

Table C.—Discharges and deaths.

	Discharges to				Removals	Deaths	Total Discharges and Deaths
	Other parts of Inst.	Southmead	Stapleton	Out-side			
Males	243	83	24	102	3	53	508
Females	86	17	15	76	10	76	280
Total	329	100	39	178	13	129	788

From the able-bodied section of the institution 937 male and 247 female cases have been given treatment (other than treatment in sick wards) and 243 males and 86 females have been admitted to the sick wards.

Twenty babies and 16 mothers were admitted during 1932 : five children and two mothers from outside, 14 babies and mothers from Southmead Hospital, and one child from the Children's Homes.

During the year 18 babies were discharged, eight outside with mothers, five transferred to other institutions outside Bristol, one to Southmead Hospital, one to casual ward, and three to the Children's Homes. Four babies were discharged without mothers, three to the Children's Homes, one to Southmead Hospital, and one outside.

Deaths.

There were 129 deaths in the institution during 1932, the average age at death being 78 years.

The following table gives an analysis of causes of death.

Table D.—Analysis of cause of death.

Senility	Chest condition	Malignant	Acute illness	Disease of nervous system
69	Not to be included with resp. system Nil	5	7	23

Disease of the respiratory system.	Disease of the circulatory system.	Disease of the genito-urinary system.	Others	Total
18	3	2	2	129

Casuals.

During 1932, 397 casuals were medically examined at the monthly examination, out of which approximately 360 were treated and 146 were admitted to city institutions and hospitals as follows :—

Eastville, 125 ; Southmead, 19 ; Stapleton, 2.

The following table given an analysis of causes of admission.

Table E.

Admissions from casual wards to city hospitals and institutions.

Aged & infirm	Skin conditions	Septic feet.	Abscesses and septic conditions	Ulc. legs and V. veins	V.D.	Cardiac
9	35	13	11	8	6	2

Table E—(continued).

Chest conditions	Rheumatism	Influenza	Malignant disease	Mental	Other causes	Total
9	5	14	1	2	31	146

APPENDIX.

Compiled from figures supplied by Registrar General.

VITAL STATISTICS.

Extracts for Calendar Year, 1932.

1931						1932
	LIVE BIRTHS.					
2,985	Legitimate	males	...	...		2,983
2,858	"	females	...	...		2,865
5,848		TOTAL	...	...		5,848
104	Illegitimate	males	...	...		111
93	"	females	...	...		106
197		TOTAL	...	...		217
6,040	TOTAL	...	...	...	...	6,065
15.10	Birth rate	...	...	...	...	15.01
	STILLBIRTHS.					
148	Legitimate	males	...	...	...	139
90	"	females...	...	...	...	90
238		TOTAL	...	...	...	229
9	Illegitimate	males	...	...	...	5
4	"	females...	...	...	...	5
13		TOTAL	...	...	...	10
251	TOTAL	...	...	...	...	239
39.9	Rate per 1,000 total births...				...	37.90
	DEATHS.					
4,737	Total	...	...	...	...	4,692
11.85	Death rate	...	...	...	...	11.62
10	Maternal deaths from sepsis	...	...	...	...	6
9	Other causes	...	...	...	...	12
	<i>Infantile mortality rate per 1,000 live births :</i>					
48.3	Legitimate	...	...	...	...	51.8
106.6	Illegitimate	...	...	...	...	78.3
50.2	Total	...	...	...	...	52.7
69	Deaths from measles (all ages)	...	...	...	...	2
6	" " whooping cough (all ages)	...	...	...	...	.31
16	" " diarrhoea (under 2 years of age)	...	...	...	...	43

Birth-rates, Death-rates, and Analysis of Mortality in the year, 1932. (Provisional Figures)

	RATE PER 1,000 TOTAL POPULATION		ANNUAL DEATH-RATE PER 1,000 POPULATION.								RATE PER 1,000 LIVE BIRTHS.		PERCENTAGE OF TOTAL DEATHS.				
	Live Births	Still-Births	All Causes	Typhoid and Paratyphoid fevers	Small-pox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhoea and enteritis (under two years)	Total deaths under one year	Certified by registered medical practitioners	Inquest cases.	Certified by coroner after P.M. No inquest	Uncertified causes of death
England and Wales	15.3	0.66	12.0	0.01	0.00	0.08	0.01	0.07	0.06	0.32	0.53	6.6	65	91.1	6.2	1.8	0.9
118 County boroughs and great towns, including London	15.4	0.70	11.8	0.00	0.00	0.11	0.01	0.08	0.07	0.28	0.48	8.9	69	91.3	5.9	2.3	0.5
126 Smaller towns (Estimated Resident Populations 25,000 to 50,000 at Census 1931).	15.4	0.69	10.8	0.00	—	0.06	0.01	0.06	0.03	0.31	0.42	4.5	58	91.9	5.8	1.3	1.0
London	14.2	0.51	12.3	0.00	0.00	0.19	0.02	0.08	0.07	0.27	0.53	12.6	66	89.4	6.2	4.4	0.0
Bristol	15.01	0.00	11.6	.002	0.00	.005	.005	0.08	0.05	0.36	0.5	4.6	53	92.2	7.5	0.3	0.0

The maternal mortality rates are as follows :

	Puerperal Sepsis.	Others.	Total.
{ per 1,000 Live Births	{ 1.61 .99	{ 2.63 1.97	{ 4.24 2.96
{ per 1,000 Total Births	{ 1.54 .95	{ 2.52 1.92	{ 4.06 2.37

ENGLAND AND WALES.
BRISTOL.

ENGLAND AND WALES.
BRISTOL.

Compiled from figures supplied by Registrar General.

CITY AND COUNTY OF BRISTOL.

**Population, Births, Deaths, Natural Increase, Infant Mortality,
Maternal Mortality, for Calendar Year 1932 and previous years.**

	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923
Estimated population (mid year)										
For birth rate ..	403,900	399,900	391,335	391,300	390,700	386,000	383,600	386,000	386,400	} 385,600
For death rate ..		399,600	391,035	391,000	390,400	385,700	383,300	385,700	386,200	
Births.										
Legitimate—males ..	2,983	2,985	3,076	3,026	3,154	3,146	3,344	3,377	3,441	3,679
females ..	2,865	2,858	2,862	2,871	2,980	2,908	3,135	3,165	3,287	3,447
Illegitimate—males ..	111	104	122	97	115	128	104	96	103	107
females ..	106	93	97	101	114	119	93	92	109	114
Total	6,065	6,040	6,157	6,095	6,363	6,301	6,676	6,730	6,940	7,347
Rate per 1,000 living ..	15.01	15.1	15.7	15.6	16.3	16.3	17.4	17.4	18.0	19.1
Deaths.										
Males	2,352	2,310	2,210	2,466	2,202	2,327	2,226	2,554	2,322	2,097
Females	2,340	2,427	2,260	2,606	2,300	2,468	2,193	2,628	2,379	2,274
Total	4,692	4,737	4,470	5,072	4,502	4,795	4,419	5,182	4,701	4,371
Rate per 1,000 population ..	11.6	11.8	11.4	12.9	11.5	12.4	11.5	13.4	12.2	11.3
Deaths under 1 year.										
Legitimate	303	282	331	340	354	340	439	470	467	434
Rate per 1,000 births ..	52	48	56	58	58	56	68	72	69	61
Illegitimate	17	21	23	24	21	23	30	41	26	22
Rate per 1,000 births ..	78	107	105	121	92	93	152	218	123	100
Total deaths	320	303	354	364	375	363	469	511	493	456
Rate per 1,000 births ..	53	50	57	60	59	58	70	76	71	62
Natural increase per 1,000 population	3.52	3.3	4.3	2.6	4.8	3.9	5.9	4.0	5.8	7.8
Marchoxa and Enteritis— (under two years)										
Deaths	43	16	26	27	30	29	38	59	40	59
Rate per 1,000 births ..	7.1	2.65	4.22	4.43	4.71	4.60	5.69	8.77	5.76	8.03
Maternal Birth (Mothers).										
Deaths	18	19	14	15	11	11	10	13	19	18
Rate per 1,000 births ..	2.96	3.15	2.27	2.46	1.73	1.75	1.50	1.93	2.74	2.45
Scarperal Fever.										
Deaths	6	10	8	12	3	8	13	23	8	6
Rate per 1,000 births ..	0.99	1.66	1.30	1.97	0.47	1.27	1.95	3.42	1.15	0.82
Marriages.										
Number	3,098	3,287	3,320	3,197	3,059	3,071	2,845	3,012	2,924	2,997
Rate per 1,000 population ..	15.3	16.4	16.9	16.3	15.7	15.9	14.8	15.6	15.1	15.5

*Figures from Registrar General's Returns.***Births.**

YEAR	BRISTOL		ENGLAND and WALES.
	Number of Births.	Birth Rate.	
1881-1885	34,574	33.0	33.5
1886-1890	33,279	30.6	31.4
1891-1895	33,091	29.4	30.5
1896-1900	40,420	26.5	29.3
1901-1905	46,280	27.2	28.2
1906-1910	43,805	23.5	26.3
1911-1915	38,666	21.6	23.6
1916-1920	35,732	19.0	20.1
1921-1925	36,795	19.1	19.9
1926-1930	31,592	16.3	16.7
1918	6,015	15.9	17.7
1919	6,700	17.8	18.5
1920	9,602	25.4	25.5
1921	8,283	21.7	22.4
1922	7,495	19.5	20.4
1923	7,347	19.1	19.7
1924	6,940	18.0	18.8
1925	6,730	17.4	18.3
1926	6,676	17.4	17.8
1927	6,301	16.3	16.6
1928	6,363	16.3	16.7
1929	6,095	15.6	16.3
1930	6,157	15.5	16.3
1931	6,040	15.1	15.8
1932	6,065	15.0	15.3

Deaths.

YEAR	BRISTOL		ENGLAND and WALES.
	Number of deaths.	Death rate.	
1881-1885	20,168	19.2	19.4
1886-1890	21,164	19.5	18.9
1891-1895	21,199	18.8	18.7
1896-1900	24,630	16.1	17.7
1901-1905	26,609	15.6	16.0
1906-1910	24,818	13.3	14.7
1911-1915	25,367	14.1	14.3
1916-1920	24,747	14.1	14.4
1921-1925	23,411	12.2	12.2
1926-1930	23,258	11.9	12.1
1918	5,795	17.1	17.3
1919	4,830	13.4	14.0
1920	4,430	11.7	12.4
1921	4,230	11.1	12.1
1922	4,927	12.8	12.8
1923	4,371	11.3	11.6
1924	4,701	12.2	12.2
1925	5,182	13.4	12.2
1926	4,419	11.5	11.6
1927	4,795	12.4	12.3
1928	4,502	11.5	11.7
1929	5,072	12.9	13.4
1930	4,470	11.4	11.4
1931	4,737	11.8	12.3
1932	4,692	11.6	12.0

Figures from Registrar General's Returns.

Infant Mortality.

YEAR	BRISTOL.		ENGLAND and WALES
	Number of deaths under one year	Rate per 1,000 births	
1881-1885	4,858	140	139
1886-1890	4,789	144	145
1891-1895	4,767	144	151
1896-1900	6,000	148	156
1901-1905	5,863	127	138
1906-1910	4,804	110	117
1911-1915	4,293	111	110
1916-1920	3,076	86	90
1921-1925	2,549	69	76
1926-1930	1,925	61	68
1918	551	92	97
1919	558	83	89
1920	665	69	80
1921	548	66	83
1922	541	72	77
1923	456	62	69
1924	493	71	75
1925	511	76	75
1926	469	70	70
1927	363	58	70
1928	375	59	65
1929	364	60	74
1930	354	57	60
1931	303	50	66
1932	320	53	65

Maternal Mortality.

YEAR	PUERPERAL SEPSIS			OTHER PUERPERAL CAUSES.			ALL CAUSES.		
	BRISTOL		ENGLAND AND WALES.	BRISTOL		ENGLAND AND WALES.	BRISTOL		ENGLAND AND WALES
	Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 births		Number of deaths	Rate per 1,000 births	
1891-1895	67	2.02	2.60	102	3.08	2.89	169	5.11	5.49
1896-1900	69	1.71	2.12	89	2.20	2.57	158	3.91	4.69
1901-1905	70	1.51	1.95	155	3.35	2.32	225	4.86	4.27
1906-1910	63	1.44	1.56	90	2.05	2.18	153	3.49	3.74
1911-1915	56	1.45	1.42	97	2.51	2.61	152	3.96	4.03
1916-1920	51	1.43	1.51	79	2.21	2.61	130	3.64	4.12
1921-1925	49	1.33	1.40	83	2.26	2.50	132	3.59	3.90
1926-1930	44	1.39	1.73	61	1.93	2.54	105	3.32	4.27
1918	10	1.66	1.28	19	3.16	2.51	29	4.82	3.79
1919	5	0.74	1.67	12	1.79	2.70	17	2.53	4.37
1920	21	2.18	1.81	17	1.77	2.52	38	3.95	4.33
1921	5	0.60	1.38	19	2.29	2.53	24	2.89	3.91
1922	7	0.93	1.38	14	1.87	2.43	21	2.80	3.81
1923	6	0.82	1.30	18	2.45	2.51	24	3.27	3.81
1924	8	1.15	1.39	19	2.74	2.51	27	3.89	3.90
1925	23	3.42	1.56	13	1.93	2.52	36	5.35	4.08
1926	13	1.95	1.60	10	1.50	2.52	23	3.45	4.12
1927	8	1.27	1.57	11	1.75	2.54	19	3.02	4.11
1928	3	0.47	1.79	11	1.73	2.63	14	2.20	4.42
1929	12	1.97	1.80	15	2.46	2.53	27	4.43	4.33
1930	8	1.30	1.92	14	2.27	2.48	22	3.57	4.40
1931	10	1.66	1.66	9	1.48	2.45	19	3.15	4.11
1932	6	0.99	1.61	12	1.97	2.63	18	2.96	4.24

Compiled from figures supplied by Registrar General.

1932.

Principal Causes of Death during calendar year.

Death Rate per 1,000	DISEASE.	Net deaths in 1932	% to total deaths
.002	Typhoid and paratyphoid fevers ...	1	.02
.005	Measles	2	.04
.005	Scarlet fever	2	.04
.08	Whooping cough	31	.68
.05	Diphtheria	22	.47
.36	Influenza	157	3.35
.05	Encephalitis lethargica	19	.41
.03	Cerebro-spinal fever	11	.24
.73	Tuberculosis of respiratory system	295	6.29
.10	Other tuberculous diseases ...	40	.85
.05	Syphilis	19	.41
.07	General paralysis of the insane, tabes dorsalis	27	.58
1.54	Cancer, malignant disease	620	13.22
.12	Diabetes	50	1.06
.66	Cerebral haemorrhage, etc....	265	5.65
2.68	Heart disease	1,080	23.02
.05	Aneurysm	18	.38
.54	Other circulatory diseases ...	218	4.65
.48	Bronchitis	194	4.13
.58	Pneumonia (all forms)	235	5.01
.17	Other respiratory diseases ...	70	1.49
.10	Peptic ulcer	41	.87
.11	Diarrhoea, etc.	43	.92
.09	Appendicitis	35	.74
.02	Cirrhosis of liver	7	.15
.05	Other diseases of liver, etc. ...	19	.40
.24	Other digestive diseases	98	2.08
.46	Acute and chronic nephritis ...	183	3.90
.02	Puerperal sepsis	6	.12
.03	Other puerperal causes	12	.25
.42	Congenital debility, premature birth, malformations, etc. ...	171	3.64
.26	Senility	109	2.32
.16	Suicide	66	1.41
.34	Other violence	137	2.92
.96	Other defined diseases	386	8.23
.007	Causes ill-defined or unknown ...	3	.06
11.61		4,692	100.00

Causes of Death at Different Periods of Life in the County Borough of Bristol during calendar year 1932.

CAUSES OF DEATH.		Sex.	All Ages.	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
ALL CAUSES	...	M. F.	2,352 2,340	189 131	26 19	32 26	50 36	95 83	101 104	132 139	248 250	399 308	575 488	506 756
1	Typhoid and paratyphoid fevers	M. F.	1 ...	...	...	...	...	...	1 ...	...	...	...	...	...
2	Measles	M. F.	1 1	...	...	...	...	...	...	...	...	...	...	...
3	Scarlet fever	M. F.	...	...	...	...	...	...	...	...	...	...	...	...
4	Whooping cough	M. F.	19 12	11 4	5 3	3 5	...	...	...	...	...	...	...	...
5	Diphtheria	M. F.	5 17	...	...	3 5	1 10	...	...	...	...	...	...	...
6	Influenza	M. F.	78 79	5 ...	1 1	3 ...	1 1	6 1	3 4	5 6	7 7	14 12	18 19	15 28
7	Encephalitis lethargica	M. F.	9 10	...	1 ...	...	1 ...	2 1	1 2	...	1 4	1 2	2 ...	...
8	Cerebro-spinal fever	M. F.	11 ...	2 ...	...	...	4 0	2 ...	2 ...	...	...	...	1 ...	...
9	Tuberculosis of respiratory system	M. F.	176 119	...	1 ...	...	3 2	29 24	41 34	30 23	34 18	30 15	7 2	1 1
10	Other tuberculous diseases	M. F.	20 20	4 4	5 ...	2 4	1 1	4 4	2 3	1 1	1 2	...	...	...
11	Syphilis	M. F.	11 8	...	1 ...	...	...	1 ...	1 ...	1 0	4 1	1 ...	2 ...	...
12	General paralysis of the insane, tabes dorsalis	M. F.	18 9	...	...	...	...	...	...	6 2	4 4	7 2	1 ...	...
13	Cancer, malignant disease	M. F.	287 333	...	...	...	1 2	...	3 7	10 31	38 68	88 81	94 88	53 55
14	Diabetes	M. F.	17 33	...	...	...	...	1 2	...	...	3 2	2 8	8 7	3 13
15	Cerebral haemorrhage, &c.	M. F.	124 141	...	...	...	...	...	1 ...	...	9 13	20 30	54 35	40 62
16	Heart disease	M. F.	502 578	...	...	...	4 2	4 11	4 14	17 17	41 41	88 58	172 162	172 273
17	Aneurysm	M. F.	14 4	...	...	...	...	...	...	1 ...	2 ...	9 2	2 ...	...
18	Other circulatory diseases	M. F.	108 110	...	...	...	...	...	...	1 4	4 3	24 10	40 33	39 59
19	Bronchitis	M. F.	83 111	4 6	...	1 ...	...	...	...	3 1	4 6	11 7	24 26	36 62
20	Pneumonia (all forms)	M. F.	138 97	33 19	4 5	5 6	5 ...	4 3	10 3	10 6	17 10	14 7	16 15	20 23
21	Other respiratory diseases	M. F.	42 28	1 ...	1 ...	3 ...	...	1 ...	1 3	3 2	6 ...	7 ...	9 3	10 20
22	Peptic ulcer	M. F.	23 18	...	...	...	...	...	1 1	4 2	6 5	4 3	6 3	2 4
23	Diarrhoea, &c.	M. F.	21 22	15 8	1 4	1 ...	...	1 ...	1 1	1 1	...	1 1	...	...
24	Appendicitis	M. F.	24 11	...	...	2 ...	8 2	3 2	...	3 ...	3 ...	3 3	1 2	1 1
25	Cirrhosis of liver	M. F.	6 1	...	...	...	...	...	...	...	1 ...	2 1	3 ...	...
26	Other diseases of liver, etc	M. F.	9 10	...	...	...	...	1 ...	...	...	1 1	4 2	...	3 6
27	Other digestive diseases	M. F.	41 57	2 1	1 1	1 1	2 1	2 5	1 2	4 5	7 11	4 13	12 4	5 13
28	Acute and chronic nephritis	M. F.	83 100	...	...	2 ...	...	3 2	2 5	5 9	9 18	22 22	28 21	12 23
29	Puerperal sepsis	F.	6	...	...	...	...	1 ...	2 ...	3 ...	...	...	...	...
30	Other puerperal causes	F.	12	...	...	...	...	3 ...	6 ...	2 ...	1 ...	...	...	...
31	Congenital debility, premature birth, malformations, etc.	M. F.	100 71	95 71	...	1 ...	2 ...	...	1 ...	...	1 ...	...	...	...
32	Senility...	M. F.	41 68	...	...	...	...	...	...	...	...	...	...	36 61
33	Suicide	M. F.	41 25	...	...	...	...	3 3	7 2	7 1	7 9	10 6	5 2	2 2
34	Other violence	M. F.	87 50	3 2	1 ...	2 2	8 3	19 5	7 1	8 2	11 3	9 4	10 13	9 15
35	Other defined diseases...	M. F.	210 176	14 9	2 3	3 2	9 9	9 13	11 9	12 19	26 23	24 19	54 40	46 30
36	Causes ill-defined or unknown	M. F.	2 1	...	...	...	...	...	...	...	1 ...	...	1 ...	...

NET INFANT DEATHS, 1932.

1931	Males			Females			Total	Rate
Total	Under 1			Total			303	51.8 per 1,000 legitimate births.
282	Legitimate			182			121	78.3 per 1,000 illegitimate births.
21	Illegitimate			7			17	52.7 per 1,000 births.
303	Total			189			320	

ANALYTICAL DATA (Chemical and Bacteriological) OF CITY WATER SUPPLY.

Number of sample	2		5		7		16		21		32	
Date of collection (1932) ...	29 February.		7 April.		18 May.		11 July.		9 September.		24 November	
Place of collection	Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory		Tap in laboratory	
Physical appearance	Clear, bright, neutral to litmus.		Clear, bright, neutral to litmus.		Clear, bright, neutral to litmus.		Clear, bright, neutral to litmus.		Clear, bright, neutral to litmus.		Clear, bright, neutral to litmus.	
Remarks on solids	No smell on heating solids.		No smell on heating solids.		No smell on heating solids.		No smell on heating solids.		No smell on heating solids.		No smell on heating solids.	
	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.	Parts per 100,000.	Grains per gallon.
Oxygen absorbed	.011	.008	.017	.012	.023	.016	.017	.012	.0096	.007	.037	.026
Free ammonia... ..	.002	.0014	.002	.0014	.0025	.0017	.0025	.0018	.002	.0014	.001	.0007
Albuminoid ammonia	.004	.003	.0035	.0025	.0035	.0025	.0045	.0032	.003	.002	.006	.004
Nitrogen in nitrates	.13	.09	.07	.05	.10	.07	.13	.09	.09	.06	.024	.017
Chlorine as chlorides	1.35	.95	1.4	1.0	1.4	1.0	1.36	.95	1.29	.90	1.25	.87
Total hardness	16.0°		13.9°		13.4°		13.9°		11.4°		15.2°	
Permanent hardness	4.6°		3.6°		3.6°		4.7°		3.5°		3.7°	
Temporary hardness	11.4°		10.3°		9.8°		9.2°		7.9°		11.5°	
Total solids	32.0	22.4	28.0	19.6	28.0	19.6	31.3	21.9	27.5	19.3	28.0	19.6
Mineral matter	26.0	18.2	23.8	16.7	22.5	15.8	26.0	18.2	23.1	16.2	24.5	17.2
Loss on ignition	6.0	4.2	4.2	2.9	5.5	3.8	5.3	3.7	4.4	3.1	3.5	2.4
Nitrites	nil		nil		nil		nil		nil		nil	
Colonies per cc on gelatine } at 22°C	9		5		11				1		4	
Colonies on agar at 37°C	+4 liquefiers		+3 liquefiers		+2 liquefiers		All liquefied		1 liquefier			
MacConkey's bile salt broth } (B. coli test) 25 cc water } used	Gas : — Acidity : +		— —		— —		— —		— —		2 +	

Results of Meteorological Observations during 1932.

TAKEN AT 9 A.M. G.M.T.

PRESSURE.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	Mean pressure — inches ...	30.178	30.472	29.956	29.746	29.847	30.055	29.878	30.066	29.897	29.702	30.056	30.047	29.992
	Departure from average ...	+0.153	+0.553	+0.067	-0.211	-1.146	+0.036	-0.134	+0.099	-0.148	-0.241	+0.114	+0.193	+0.028
	Greatest pressure — inches ...	30.964 (26th)	30.815 (21st)	30.327 (27th)	30.484 (13th)	30.104 (17th)	30.277 (8th)	30.229 (9th)	30.368 (23rd)	30.429 (15th)	30.239 (19th)	30.494 (13th)	30.792 (25th)	30.964 (Jan. 26)
	Least pressure — inches ...	29.178 (10th)	30.042 (24th)	29.259 (30th)	29.129 (3rd)	29.556 (9th)	29.706 (28th)	29.453 (1st)	29.804 (30th)	29.489 (8th)	29.103 (9th)	29.611 (23rd)	29.470 (3rd)	29.103 (Oct. 9)
	Extreme range — inches ...	1.786	0.773	1.068	1.355	0.548	0.571	0.776	0.564	0.940	1.136	0.883	1.322	1.861
RAINFALL.	Total rainfall at Bishopston — inches	4.29	0.08	2.49	3.21	5.93	1.26	3.60	0.86	5.92	6.58	1.85	1.80	37.89
	Departure from average — inches ...	+1.38	-2.39	+0.06	+0.89	+3.73	-1.30	+0.77	-2.82	+3.06	+2.06	-1.48	-1.72	+2.78
	Heaviest fall in 24 hours — inches ...	0.94 (6th)	0.04 (9th)	0.65 (29th)	0.73 (3rd)	1.60 (1st)	0.84 (30th)	0.80 (31st)	0.33 (29th)	1.32 (2nd)	0.88 (20th)	0.95 (30th)	0.43 (31st)	1.60 (May 1st)
	Number of rainy days ...	16	3	12	25	25	4	21	9	22	28	13	16	194
	Total rainfall at Frampton Cotterell — inches	3.80	0.14	2.40	3.41	6.08	1.33	2.73	0.82	4.91	6.20	2.01	1.47	35.30
	Departure from 25 years' average— inches	+0.98	-2.08	+0.24	-1.53	+4.02	-0.81	-0.21	-2.35	+2.50	+2.90	-0.75	-2.26	+3.71
	Heaviest fall in 24 hours — inches ...	0.85 (6th)	0.05 (9th)	0.54 (8th)	0.59 (3rd)	1.69 (20th)	0.94 (30th)	0.71 (13th)	0.31 (29th)	1.20 (2nd)	0.89 (7th)	0.93 (30th)	0.35 (31st)	1.69 May 20)
	Number of rainy days ...	15	5	13	25	21	5	18	10	21	28	18	18	197
	Departure from 25 years' average— inches...	-2.8	-9.5	-2.8	+10.3	+6.8	-7.3	+3.6	-6.1	+8.6	+11.3	+2.3	-1.3	+13.1
TEMPERATURE	Mean temperature (max. & min.)—degrees ...	42.7	36.9	40.9	45.6	51.6	58.7	62.1	65.4	56.4	48.6	44.3	42.3	49.6
	Departure from average —degrees ...	+3.9	-3.0	-1.5	-2.2	-2.0	-0.6	-0.0	+4.4	-0.3	-1.9	+0.6	+2.8	0.0
	Maximum shade temperature —degrees ...	56.8 (19th)	49.9 (23rd)	57.1 (22nd)	58.9 (30th)	68.0 (31st)	78.0 (17th)	77.8 (9th)	93.6 (19th)	75.6 (14th)	60.9 (16th)	57.8 (3rd)	54.4 (18th)	93.6 (Aug. 19)
	Minimum temperature —degrees ...	25.6 (9th)	24.6 (19th)	19.0 (13th)	28.7 (13th)	29.7 (8th)	37.1 (6th)	44.0 (19th)	51.2 (2nd)	35.8 (24th)	28.8 (29th)	29.9 (21st)	26.7 (7th)	19.0 (Mar. 13)
	Extreme range —degrees ...	31.2	25.3	38.1	30.2	38.3	40.9	33.8	42.4	39.8	32.1	27.9	27.7	74.6
SUNSHINE, HUMIDITY, &c.	Hours of sunshine (estimated) ...	60	62	139	84	117	233	140½	191	124½	110½	68	72	1401½
	Days of bright sunshine ...	6	7	12	5	6	19	8	13	10	9	7	7	109
	Days entirely overcast ...	14	12	5	4	6	1	5	5	5	4	13	9	83
	Mean humidity ...	91.95%	85.6%	82.65%	87.9%	85.7%	73.2%	81.55%	82.9%	89.1%	88.73%	90%	88.4%	85.64%
	Days with fog ...	9	4	2	0	0	0	2	6	4	5	6	6	44
	Days with thunder ...	1	0	0	2	1	1	1	2	2	0	0	0	10
	Days lightning alone ...	2	0	0	0	1	0	0	3	0	1	0	0	7
	Frosty nights in screen ...	6	15	16	1	3	0	0	0	0	4	4	4	53
	Frosty nights on grass ...	10	21	21	6	6	1	0	0	1	11	13	14	104

COSTING RETURNS, 1932-33.

Statement showing the average cost per patient per week of the treatment of patients.

ITEMS.	SOUTHMEAD HOSPITAL.		HAM GREEN HOSPITAL.		NOVERS HILL HOSPITAL		HAM GREEN SANATORIUM		FRENCHAY PARK SANAT'M		CHILDREN'S HOMES	
	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*	Gross total cost	Average cost per patient per week*
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
Salaries, wages, uniforms & dresses of staff, etc.:												
(a) Medical staff	2,360	1 9	1,112	3 10	114	1 11	741	2 1	728	3 0	26	...
(b) Matron and nursing staff	5,572	4 2	2,925	10 0	468	7 11	1,950	5 5	1,199	5 0	952	1 5
(c) Other staff	10,060	7 6	3,137	10 9	1,046	17 9	2,091	5 10	1,250	5 2	3,476	5 1
(d) Council's contributions to superannuation fund	1,466	1 1	524	1 9	115	1 11	349	1 0	143	7	484	9
(e) Employers' contributions in respect of National Health and Pensions and Unemployment Insurance	345	3	162	7	37	7	108	4	55	3	115	2
Provisions for patients and staff	11,257	8 4	2,667	9 2	570	9 8	6,222	17 4	1,934	8 0	3,097	5 9
Drugs and medical and surgical appliances	2,982	2 2	1,091	3 9	6	1	728	2 0	345	1 5	65	1
Clothing of inmates	...	...	...	...	...	...	...	...	...	...	2,066	3 0
Superannuation allowances under the Poor Law Acts	...	...	...	...	...	...	...	...	...	...	577	10
Fuel, light, water and laundry, wages of laundry staff and cost of laundry materials	4,550	3 5	2,579	8 10	514	8 9	1,720	4 10	1,089	4 6	2,591	3 10
Domestic renewals, repairs and additions ...	2,275	1 8	893	3 0	202	3 5	595	1 8	198	10	815	1 2
Structural additions, alterations, renewals, repairs and painting	5,270	3 11	1,912	6 7	197	3 4	1,275	3 6	304	1 3	2,479	3 8
Ambulance and other transport	477	4	924	3 2	212	3 7	616	1 9	152	7	419	7
Expenditure on farm and garden	...	...	1,556	5 4	...	...	1,038	2 11	519	2 2	21	...
Miscellaneous expenditure	748	7	313	1 1	135	2 4	208	7	187	9	379	7
Rent, rates (excluding water rates, taxes and insurance), etc.	1,067	9	669	2 3	133	2 3	446	1 3	480	2 0	644	11
Loan charges	4,289	3 2	4,296	14 8	209	3 7	2,864	8 0	3,428	14 1	808	1 2
GRAND TOTALS	52,718	1 19 1	24,760	4 4 9	3,958	3 7 1	20,951	2 18 6	12,011	2 9 7	19,824	1 9 0
Deduct.—Income other than income in respect of the treatment of patients, viz. :—												
(a) Income from farm and garden	...	...	1,471	7 2			981	3 11	343	2 4	45	...
(b) Other income, including sale of garden produce where no separate farm and garden accounts	178	2	637		236	4 0	425		209		7	1
NET TOTALS	£52,540	£1 18 11	£22,652	£3 17 7	£3,722	£3 3 1	£19,545	£2 14 7	£11,459	£2 7 3	£19,722	£1 8 11
	Whole institution.		Whole institution.		Whole institution.		Whole institution.		Whole institution		Whole institution	
Average number of beds, excluding cots in maternity wards	572		247		60		155		100		362	
Average number of beds excluding cots in maternity wards occupied	369		112.005		32.6		137.3		92.87		262	
By medical cases	108		...		...		...		...		...	
By surgical cases	40		...		...		...		...		...	
By maternity cases	188,717		40,882		8,261		50,140		33,915		95,641	
Number of patient days during the year ...	365		365		365		365		365		365	
Number of days in the year during which the institution was open	3,253		1,449		396		...		...		...	
Number of patients discharged or died during the year	...		...		...		96.8		70.7		...	
Classification of cases—	...		...		...		3.2		29.3		...	
Observation and pulmonary	...		...		...		...		...		...	
Non-pulmonary	378		74		...		...		...		...	
Number of operations excluding dental operations performed under a general anaesthetic	81.70%		73%		22%		68%		70%		...	
Average percentage of bed cases during year ...												

* Parts of a penny not shown.

